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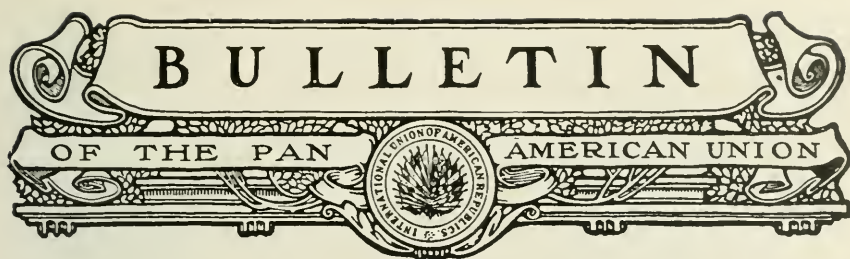
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Photograph by Brown & Dawson, N. Y.

AVENIDA RIO BRANCO, RIO DE JANEIRO, BRAZIL.



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No. 1

INAUGURATION DAY IN BRAZIL¹

THE 15th of November, anniversary of the proclamation of the Republic, is the date fixed for the inauguration of Presidents elected every four years in the United States of Brazil. Owing to ill health the recently chosen President of the Republic, Dr. Rodrigues Alves, could not, on November 15, 1918, take the constitutional oath, hence Dr. Delphim Moreira, vice president-elect for the term 1918-1922, became chief executive pending the recovery of Dr. Rodrigues Alves.²

The universal perturbation engendered by the great war led nations throughout the world to pursue a prudent and patriotic course politically during the past year, and to intrust the guidance of their destinies through the crisis to their ablest and most discreet men. In confronting the difficult situation which the world has been facing, Brazil chose as her chief executive the devoted patriot, Dr. Rodrigues Alves, a statesman who, in the four-year period from 1902 to 1906, had converted the formerly inadequate Federal capital into an attractive and healthful city, harmonizing the natural beauties of the region with the most recent inventions of human progress. Since the accomplishment of this great work Dr. Rodrigues Alves has been considered one of the great statesmen of our time.

For vice president one of the distinguished men in the public life of Brazil was chosen, Dr. Delphim Moreira da Costa Ribeiro, who since 1894 has served his native State in the Chamber of Representatives, as secretary of the interior, and as president.

¹ By J. de Siquiera Coutinho, Pan American Union Staff.

² As the Bulletin goes to press we learn with regret that Dr. Rodriguez Alves, president-elect of Brazil, died on January 16 after a long illness. Under the constitution an election will be held to choose a new president.



Photograph by Malta, Rio de Janeiro.

HIS EXCELLENCY DR. RODRIGUES ALVES, PRESIDENT ELECT OF BRAZIL.

The President elect of the United States of Brazil who, owing to ill health could not take the oath of office on the past 15th of November, was born July 7, 1848, in Guaratingueta, State of São Paulo. After completing a course in law he identified himself with the emancipation movement. Later he was made deputy and subsequently governor of the Province of São Paulo and Imperial counsellor. After the Republic was proclaimed he became federal deputy and secretary of the treasury for two terms, senator in several legislatures, President of the Republic for the term 1902-1906, and was recently elected to the same office for the period 1918-1922. He is considered one of the greatest statesmen of the time and the patriarch of modern Brazil.

His Excellency Dr. Francisco de Paula Rodrigues Alves was born July 7, 1848, of Portuguese parentage, in the picturesque city of Guaratinguetá, State of São Paulo. After completing a course in the College of Law of São Paulo he devoted himself to a study of economics, and particularly to the slavery question, taking an active part, together with Joaquim Nabuco and Ríó Branco, in the campaign of abolition, in which movement he led by emancipating the slaves on his estates.

In 1872 he was elected provincial deputy, later being made governor of the Province of São Paulo by the Imperial Government, which post he left when differences with the royal administration made it impossible for him conscientiously to remain in office. Prior to his resignation the title of imperial counsellor had been conferred upon him.

When the Republic was proclaimed, Dr. Rodrigues Alves attended congress as federal deputy, having been one of the leading spirits in the fusion of the various political elements. Called to discharge the portfolio of secretary of the treasury during the régime of Field Marshal Floriano Peixoto, he felt obliged to resign the position when he could not submit to a dictatorial enactment of the day. He returned to congress as senator, acting again, during the term of the eminent Dr. Prudente de Moraes, of São Paulo, as secretary of the treasury, from which post he went to a seat in the senate. He was shortly afterward elected president of his native State, subsequently succeeding Campos Salles as chief executive of the Republic.

It was during his administration, which extended from 1902 to 1906 that Brazil attained its national eminence. With the tension in the popular mind relaxed by the wise influence of President Prudente de Moraes and with public credit secured by President Campos Salles, Brazil entered upon a period of great material transformation and administrative reorganization under Dr. Rodrigues Alves, who judiciously surrounded himself with several of the most cultured and experienced Brazilian minds. Thus the minister of foreign affairs, the Baron de Ríó Branco, gained for Brazil an enviable international status; Dr. Lauro Muller, through a network of railroads, made possible the development the country has attained to-day, and also laid the foundations for the transformation of Rio de Janeiro; Oswaldo Cruz freed the capital from the plague of fever and pest; and the indefatigable Dr. Pereira Passos, with the aid of Dr. Paulo Frontin, constructed the famous Avenida Ríó Branco, and bequeathed to Rio de Janeiro the embellishments that make her the most beautiful city of our continent.

When Dr. Rodrigues Alves left the presidency the country was flourishing in every way. Brazil offered a wide field for the invest-



Photograph by Malta, Rio de Janeiro.

HIS EXCELLENCY DR. DELPHIM MOREIRA, VICE PRESIDENT OF BRAZIL.

Dr. Delphim Moreira was born in the State of Minas, November 7, 1868. Completing his studies of law in 1890, he entered upon a career as lawyer. From 1894 to 1902 he was State deputy, from 1902 to 1906 secretary of the interior of the State of Minas, in 1909 federal deputy, from 1910 to 1914 secretary of the interior of his native State, and from 1914 to 1918 president of the same State. Possessed of a pleasing personality, Dr. Moreira is a favorite in Brazil to-day.

ment of foreign capital, and her fertile soil was prepared to receive immigrant hosts.

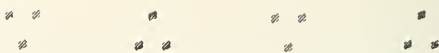
Admired and respected by all, Dr. Rodrigues Alves retired to his native State, whence he was called by popular election to reassume the presidency of the State a short time subsequently. In the recent critical moments, when war seemed about to devastate the world, the Brazilian nation recalled her leader, who, in spite of the delicate state of his health, devoted his energies anew to the service of his country in the presidential chair.

When in September, 1918, I had the pleasure of calling upon the eminent statesman in his home in Guaratinguetá, his excellency, though convalescing from an illness, repeated statements he had made in an address before the Club dos Diarios concerning certain governmental projects. Before completing his plans he expected the arrival of the distinguished diplomat, Señor Domicio da Gama, to whom he had tendered the portfolio of Minister of Foreign Affairs, and in whom all Brazil has fixed its highest hopes.

The vice president of the Republic, Dr. Delphin Moreira, was born November 7, 1868, in the city of Christina, State of Minas. After completing his high school studies in the city of Mariana, he studied in the College of Law of São Paulo, where he was a school-mate of Dr. Wenceslao Braz, who has just completed a term as President of the Republic. Dr. Moreira, who from youth was recognized as a sincere and ardent republican, was made district attorney by the provisional government of the Republic, and later, district judge in Santa Rita de Sapucahy, where he made his residence. In 1894 he was elected deputy to the legislature of the State of Minas, and after a second term, which extended to 1902, he was given a portfolio in the State government, at that time administered by Dr. Francisco Salles. During this term, Dr. Moreira directed especial attention to economics and education. At the end of Dr. Salles's term, from 1907 to 1908 he was State senator, at the end of which period he was made deputy to the federal congress, a post he occupied but a short time before he was called upon again to the secretaryship of the interior of the State of Minas. In 1914 he was elected president of the State for four years. During his administration Minas made marked progress in agricultural, mining, and industrial projects. Dr. Moreira, an affable gentleman of idealistic tendencies, is quite idolized by modern Brazil.



ST. LOUIS



AMONG the great cities of the middle western section of the United States, St. Louis, Mo., on the west bank of the Mississippi, easily stands at the top of the little group. Founded in 1763 by Pierre Laclède, it has grown from a small settlement in the midst of a wilderness to a metropolis of 820,000 people. Louis XV had ceded the territory to the east of the Mississippi to England, while at the same time he had made a treaty transferring the west bank to Spain. It was not until 1770, however, that Spanish authority was established at St. Louis. In 1800 the territory was retroceded to France, and in 1804 St. Louis passed to the United States with the rest of the territory then known as Louisiana. This resulted in a large immigration from the States in the East, and in 1831 the city had 6,000 inhabitants and has steadily increased in size ever since. As is the case with many large cities, St. Louis was visited by terrible disasters from time to time caused by floods and tornadoes. The worst of these was in 1896 when a terrific tornado destroyed many lives and millions of dollars worth of property.

At present St. Louis claims the honor of being the fourth largest city in the United States. So does the city of Boston, Mass., and it is necessary to wait until the next official census in 1920 to determine which is right. Within a radius of 500 miles, however, may be found 40,000,000 people, or about two-fifths of the population of the country. Pierre Laclède must have been extremely far-sighted when he chose such a spot for a settlement. Situated where the Missouri River empties into the mighty Mississippi would alone make it a point well adapted to trade and industrial activity, but added to this feature are its advantages of being very nearly the geographical center of the United States and in a territory that, in productivity, is unsurpassed in the country. Primarily a trade center, St. Louis has developed that phase from an \$80,000 fur trade five years after its founding to a trade of over one billion dollars in 1917.

The factor, however, that has been the most instrumental in building up the city of St. Louis is its unique location. It is in truth what it claims for itself—the largest city completely surrounded by the United States. It is not only a center in itself, but it is a center of centers. Within a radius of a few hundred miles are to be found the population and geographical centers of the country. The cotton center, center of farm production, the wheat, oat, cattle, lead, and zinc, and horse and mule centers are all also within a few miles of this advantageously located metropolis. It is the location



BIRD'S-EYE VIEW OF BUSINESS SECTION, ST. LOUIS, MO.



"OLIVE STREET CANYON," ST. LOUIS, MO.

The Railway Exchange Building, one of the largest office buildings in point of area in the world, is shown in the right foreground.

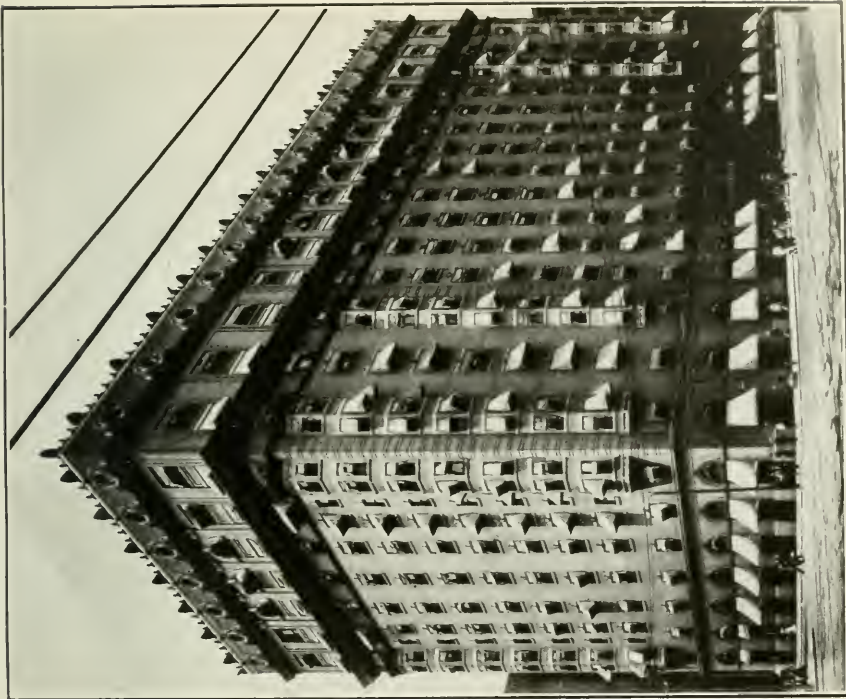


PIERCE BUILDING, ST. LOUIS, MO.
A modern office building in the heart of the city.

of the city that has given it its importance in the country. There are many instances of cities growing to large proportions because manufacturing places, employing thousands of workmen, have been established in their locality, but there are a far lesser number that have been founded, like St. Louis, in the midst of a wilderness and have grown merely because of their peculiar location. Even as early as the year 1820 the trade of the city of St. Louis amounted to \$2,500,000, and at the time of the Civil War in 1860 this great river port was lined for over a mile by docks, at which the river boats discharged cargo amounting to many millions of dollars. Although the day of river traffic passed to a considerable extent with the advent of the railroads, St. Louis to-day has a water front extending more than 20 miles along the Mississippi.

As a food center St. Louis is favorably situated. The Mississippi Valley in which St. Louis is the principal city, and the great logical central market, is the main producing area of the United States. Over 70 per cent of the acreage in farms of the entire United States is found in the valley; 69 per cent of the farm values; 76 per cent of the wheat production; 72 per cent of the live stock; 85 per cent of the corn production; 74 per cent of the cattle; 52 per cent of the sheep; and 81 per cent of the hogs. Besides this vast centralization of the country's food production around the largest city on the largest river, there is 70 per cent of the cotton raised in the valley; 55 per cent of the wool is produced here; 69 per cent of the petroleum; 47 per cent of the lumber and 60 per cent of the bituminous coal. St. Louis also has the largest inland coffee market in the world.

St. Louis industries cover almost every field of manufacturing and jobbing. A fair proof that the city is growing is the fact that it has gained 29 per cent in manufactures since 1909 and 100 per cent in bank clearings since 1903. Three thousand two hundred factories in St. Louis employ 130,000 people with wages amounting to \$90,000,000. St. Louis excels any other city in the world in the manufacture of shoes, and has the largest fur market in the world. It also claims to lead the world with the largest lead works, brick-works, drug house, hardware house, woodenware house, tobacco factory, terra-cotta works, street-car plant, and wholesale paper house. Transportation for both laborers and products, and cheap fuel are the two most important factors in building up industries and St. Louis is well supplied with these. The street cars of the city take care of the traffic excellently and carry more than a million passengers a day. There are 345 miles of street railway track in the city proper, with an additional 112 miles in the suburbs. There are 247 transfer stations. St. Louis has 27 railroads entering its gates from all points of the compass, and all of these systems use a unified terminal system for



MODERN HOTEL IN ST. LOUIS, MO.



UNION RAILWAY STATION, ST. LOUIS, MO.

Twenty railroads from all four points of the compass run their trains into this station. It covers 11 acres of land, has 32 tracks, and its gates are never closed.



ST. LOUIS CATHOLIC CATHEDRAL.

The splendid stonework, together with its pleasing architectural design, make this church one of the handsomest places of worship in the country. It was erected at a cost of \$3,000,000.



CITY HALL, ST. LOUIS, MO.

In this structure, which covers a whole square, are located the offices of the city government. The building was especially designed for housing a large number of officials and other employees.



COURTHOUSE, ST. LOUIS, MO.

The low building in the foreground is one of the city's older structures. During the early days, when slavery existed in the United States, the steps of this building were used as a slave market, being one of the most important in the country.

both freight and passengers. The entire city is surrounded by belt lines, planned to give trackage connections with all the trunk lines which terminate in St. Louis. A considerable part of the mileage of these belt lines runs through suburban territory close to the city, giving opportunity for the location of factories with plenty of room for homes for the employees. Situated as it is in the midst of the bituminous coal fields, cheap fuel is one of the attractions that appeal to manufacturers. Under ordinary conditions coal for manufacturing purposes delivered on the switches in St. Louis costs from \$1.50 to \$1.70 per ton.

Although St. Louis is primarily a manufacturing and commercial city, the visitor can not fail to notice its other features. To the east the city pushes itself by four busy bridges into a railroad, manufacturing, and stockyard district. This district, known as East St. Louis, is really a part of the city proper but for the fact that a State line intervenes. It is, however, the second largest and fastest growing city in the neighboring State of Illinois. St. Louis has been so busy developing its suburbs and its trade territory generally that the city itself is underecapitalized. Its real estate for factory, store, or home can be bought at lower figures than its comparative values would justify. The realty valuations have increased only 23 per cent in 10 years, in the face of a 100 per cent increase in everything that makes city real estate valuable.

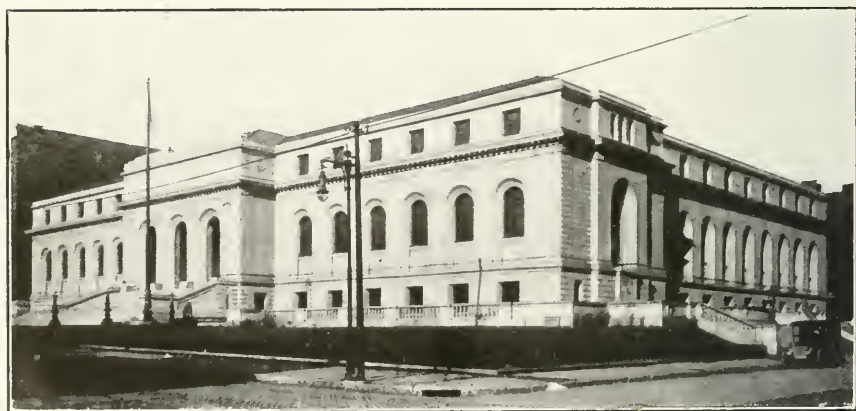
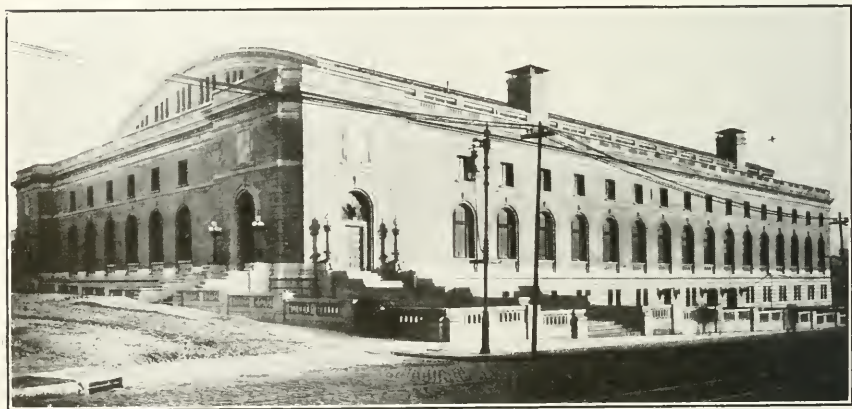
Within the last decade cities have paid increasing attention to their beautification by means of public parks and playgrounds, believing that such things are valuable not only in an aesthetic sense, but that the results therefrom increase the health and efficiency of the city's inhabitants. The parks of St. Louis are among the finest in the United States, and all of them are easily within reach of the majority of the people. Forest Park, the largest in St. Louis and the third largest in America, has many beautiful trees and drives. The Des Peres River flows through this park, and it also contains several lakes. Among the streets leading to and adjoining the park are several that rank among the finest residential sections of the world. These are wide avenues, generally inclosed at each end by ornamental gateways and contain many beautiful houses, each standing upon its own spacious grounds. The Missouri Botanical Garden, about 75 acres in extent, contains 11,000 species of plant life, and is excelled only by the Royal Botanical Garden at Kew, England. There are several other parks, smaller but none the less beautiful, at various places throughout the city. St. Louis also has two of the largest open-air municipal swimming pools in the country.

St. Louis schools and educational institutions employing 2,530 teachers are a recognized model, visited annually by international missions seeking the latest in methods and architecture. Wash-



ENTRANCE TO WASHINGTON TERRACE.

Washington Terrace is one of the best residential sections in the city of St. Louis



PUBLIC BUILDINGS, ST. LOUIS, MO.

Top picture: The municipal courts building. Center picture: The post office erected by the United States Government at a cost of \$1,250,000. Bottom picture: The Central Public Library.

ington University and St. Louis University are two of the best American colleges, numbering several thousands of students. Each institution has the most modern equipment and is housed in handsome buildings. Washington University is noted for the large powers given it by its charter, which permits an undergraduate department, schools of engineering, fine arts, law, medicine, dentistry, manual training, and schools for boys and girls. The Museum of Fine Arts situated in Forest Park contains large collections of casts, lace, glass, pottery, mosaics, ivory carvings, and wood and metal work. A recent addition to the city, the Barnes Hospital, whose group of buildings cost more than \$3,000,000, gives St. Louis the largest teaching hospital service of any city in America.

CONTEMPORARY INTEL- LECTUAL LIFE IN THE ANDEAN COUNTRIES¹

UNFORTUNATELY for ourselves, we North Americans are not as closely in touch with our coworkers in the various Latin American countries as we should be. This is especially true of such branches of learning as those represented by the anthropologist and the historian. True, the situation is now far better than it formerly was, largely owing to the efforts of the Pan American Union and also to the beneficial stimuli supplied by the Pan American Scientific Congress, the International Congress of Americanists, and kindred reunions. My purpose in this short paper is, if possible, to supplement in some small measure the work done on a large scale by those bodies in binding the intellectual worlds of Latin America and Anglo America more firmly together. Therefore I purpose to show the recent intellectual achievements of some of the leaders of thought in the Andean countries—Peru, Bolivia, and Ecuador.

No better beginning can be made than by saying something about Don Ricardo Palma, the "grand old man" of Peruvian, and, indeed of Latin American, letters. Palma was born in 1833, and he has been writing ever since the sixties of the last century. At the time of the war between Chile and Peru (1879-1883) he was director of the National Library in Lima, and when that great institution was wrecked during the Chilean war, Palma, with magnificent courage

¹ By P. Ainsworth Means.

and scholarly devotion, set himself the weary task of building up the library once more. The fact that it is to-day one of the best libraries in America is eloquent of the success of his labors.

The chief and most individual contribution to literature and historical science which Palma has made is the series of volumes containing his *Tradiciones peruanas*. The tradición of Palma is a short story or anecdote of some historic or semihistoric incident, the language in which it is told being a simulacrum of that in use at the period of the story. Some of the tradiciones are perfectly correct history; others are frankly "embroidered" by Palma's wonderful wit and by his rapier-like satire. Because of the style, excessively brilliant and incisive, the *Tradiciones peruanas*, taken as a whole, form a mosaic which shows the historical student exactly the sort of life that was led during Peru's colonial period. To anyone who wishes to write of those days the tradiciones are invaluable on account of the strong sense of local color with which they fill one. Palma has also written a large number of excellent poems, but it is plain that his fame will rest almost wholly on the *Tradiciones peruanas*. To-day the old gentleman lives quietly in a charming house near Lima, justly receiving the veneration of all who love the Spanish language, which he has so richly adorned.

Of the younger writers on literature and history the chief is probably Dr. Don Javier Prado y Ugarteche, rector of the University of San Marcos. Prado's chief works are: *Estado social del Perú durante la dominación española* (Lima, 1894), and, *El genio de la Lengua y de la Literatura Castellana y sus Caracteres en la historia intelectual del Perú* (Lima 1918). The first-mentioned work is an intensive analytical study of the political and social institutions of colonial Peru. It is a work of the very first importance for the student of Latin-American history. Of the same, or even superior, excellence is Prado's other book, a history of Peruvian literature, similar in scope and method to the great work of Menéndez y Pelayo in Spain and Fitzmaurice-Kelly in England. No sound history of Peru can ever be written without copious use of these two works.

In addition to his literary and academic activities, Prado has found time to create what is undoubtedly one of the finest collections privately owned in America. I may say with emphasis that his collection of pre-Columbian antiquities from various parts of Peru is the finest in the world, whether public or private. The objects, many of which are truly priceless on account of their beauty and rarity, represent every phase of the lives of the ancient Andeans, for everything from the humblest household utensils to the most gorgeous ceremonial garments and vases is amply exemplified. The pre-Columbian section of the Prado collection is seriously rivaled, if not actually equaled, by the collection of colonial furniture, tapestries, silver and gold ware, and paintings. The huge house of Dr.

Prado contains room after room filled with specimen pieces which call forth the admiration even of people who have lately seen the Wallace and the Morgan and the Gardner collections. To gain a true sense of what colonial Peruvian high society was like one has but to read the *Tradiciones Peruanas* while wandering from room to room in Dr. Prado's mansion or while browsing among the richly bound volumes of his large and beautiful library.

Of the youngest group of historico-literary writers are Dr. Don José de la Riva-Agüero y Osma, the brothers Francisco and Ventura García-Calderón, and Don Felipe de Barreda y Laos. It so happens that all of them belong to exceedingly important families—a fact which has probably increased their natural leaning toward historical study, for there is an atmosphere of intimacy and deep understanding in their works which is wholly charming, especially in contrast to the exceedingly impersonal style which too many of our own historians affect.

Riva-Agüero's chief published works are *Carácteres de la literatura del Perú independiente* (Lima, 1905) and *La historia en el Perú* (Lima, 1910). Of these the more important is the former. It forms a reference book of the best sort, for in it one discovers plentiful and authoritative data on which to base a more detailed study of almost every phase of Peruvian prehistory and history. All the most weighty judgments on historical matters are presented and satisfactory conclusions are presented to the reader's attention.

Dr. Riva-Agüero, in addition to being a writer, is also very active in politics and is the head of the political party to which most of the intelectuales belong. His principles and ideals are of the most enlightened and progressive. In addition to these two chief activities, Riva-Agüero is likewise a traveler, having made extensive journeys in Europe, North America, and in his own continent. One of these, a trip from Cuzco to Huancayo in 1912, is most interestingly described in *Por la sierra*, a book of which Spanish and English editions are in active preparation.

Don Francisco García-Calderón, who is not to be confused with his illustrious father, sometime president of Peru, is quite as well known in Europe as in South America, for he has lived many years in France, and writes in French as well as in Spanish. His chief works are: *Le Pérou contemporain* (Paris, 1907), *Les démocraties latines de l'Amérique* (Paris, 1912), and *La creación de un continente* (Paris, 1913). The two first mentioned are close analytical studies of sociological aspects of Latin America, studies on which all subsequent works of a similar nature must very largely be based. The third is a study of the revolution against Spain and its effects, especially as regards continental solidarity.

Don Ventura García-Calderón works in a field adjoining, but clearly separated from that in which his brother labors so well.

Don Ventura is undoubtedly one of the three or four rising young literary critics of the first order now writing in Latin America. His chief works are: *Del romanticismo al modernismo* (Paris, 1910), and *La literatura peruana* (Paris and New York-*Revue hispanique*, XXXI, pp. 305-391, 1914). The first of these is an able discussion of the various and often conflicting influences at work upon Peruvian literature since the independence. Judicious use is made of the anthological method, plentiful illustrations of each movement being given. The second work is a general view of Peruvian literature. It is refreshingly at variance now and then with Prado's work on the same subject, and the two taken together furnish a firm basis for all detailed study. The bibliographical material given in Don Ventura's book is especially valuable.

Don Felipe de Barreda y Laos, in his *Vida intelectual de la Colonia* (Lima, 1909), has delved down into the very fundamentals of the colonial period in Peru, and he portrays with exceeding skill the exact character of intellectual life and ideals in those picturesque days.

Don Mariano H. Cornejo resembles Don Francisco García-Calderón in two essential points—he has lived in France and tends to write in French rather than in Castilian, and he is a sociologist as well as an historian. His chief work is *Sociologie générale* (Paris, 1911, two volumes). It is a work very similar in scope and in quality to the works of Giddings, Spencer, Buckle, and Kidd in English. During his residence in Paris as Peruvian minister to France, Cornejo has evidently put himself into close touch with the leaders of sociological thought in Europe, and consequently his works show a mellow erudition, which, combined with their high literary quality, makes it a pleasure as well as a necessity for serious writers on Peru to use them.

Three other Peruvian sociologists should here be mentioned. They are Don Alberto Ulloa y Sotomayor, Don Alberto Salomón, and Don Alberto Ballón-Landa. All three are making highly valuable contributions to our knowledge of Andean social and racial problems, their chief works being respectively, *Organización social y legal del trabajo en el Perú*, *El desarrollo económico del Perú*, and *Los hombres de la selva*. All three appear in the *Revista Universitaria* of the University of San Marcos for the years 1917 and 1918.

Don José Antonio de Lavalle y García's two books, *De agronomía nacional* and *Los caracteres agrológicos de las tierras cultivadas en la costa del Perú* (both Lima, 1918), show that the Peruvians are arousing themselves to make the intensive examination of the agricultural resources of their land which has so long been needed.

Less strictly literary and more purely historical are the works of Horacio H. Urteaga and Carlos B. Romero. As students of the pre-Columbian period in Peru both have done much work, but they seem to be strangely out of touch with modern scientific investigation

along certain lines, or else sceptical of its solidity, for one finds them, especially Urteaga, indulging in conjectures reminiscent of Le Plougeon and Lord Kingsborough and Ignatius Donnelly (of Atlantis and Baconian fame). However, one readily forgives their little archaisms in view of the fine work that they are doing in publishing well-edited and carefully annotated editions of rare or unpublished works on Peruvian history and prehistory (*Libros y documentos referentes a la historia del Perú*). Urteaga has just issued the first volume of a new *Colección de historiadores clásicos del Perú*. The first volume contains the first three books of the *Comentarios reales* of Garcilaso de la Vega, preceded by the eulogy of the Inca written by Riva-Agüero. The illustrations, (especially the excellent color plate which forms the frontispiece) and carefully compiled notes greatly elucidate the text. Another important Peruvian historian is Don Víctor Maúrtua. His book, *La cuestión del Pacífico* (Lima, 1901), is one of the standard works about the Chilean war. He also edited that remarkable and valuable set of documents known as *Juicio de límites entre el Perú y Bolivia* (Madrid and Barcelona, 1906, 12 volumes and atlas). There is a large number of documents in this compilation, nearly all of which have valuable information to give upon one aspect or another of Peruvian history.

Less easy to classify in rigid groups are such writers as the following:

Dr. Carlos Wiesse is the author of *Las civilizaciones primitivas del Perú* (Lima, 1913). That work is an admirable handbook of Peruvian pre-history, and it has the additional merit of being the first work, so far as I know, written in Latin America to present the sound scientific findings of Dr. Ales Hrdlicka anent the origin of man in America. Another merit of Wiesse's work is that of presenting what strikes me as being the best tabulation of the Inca sovereigns which has yet been made.

Dr. Víctor Andrés Belaúnde is the author of *El Perú antiguo y los modernos sociólogos* (Lima, 1908). With much analytical skill Dr. Belaúnde has shown in detail the marvelous administrative mechanism of the Inca system in ancient Peru. He then shows the bearing of all that upon modern social questions. Using this work in combination with the writings of Heinrich Cunow and the late Sir Clements Markham and Juan Bautista Saavedra (a Bolivian, of whom more anon), one has complete data for the social organization of Incaic Peru.

Dr. Julio C. Tello is a very young man (at least as far as his literary career is concerned). He was partly educated at Harvard, and has a clear, incisive mind. In spite of the fact that he is a medical practitioner, he has devoted himself to archeological and ethnological investigations. Recently he wrote a wonderful series of archeological papers (Lima, 1917), which are invaluable treatises on

that subject. For the most part, however, Tello's contributions to Peruvian literature have taken the form of short but excellent studies of sociological and medical subjects. Don Juan Pedro Paz-Soldán y Valle Riestra is the author of many excellent papers, his chief work being "*La Ciudad de los Reyes*" (Lima, 1915).

These, then, are a few of the chief literary and scientific men of Peru. Others there are of great capabilities, but it is my bad fortune to know very little about them. Indeed, there is a deplorable lack of connection between our scientific circles up here and those of the various Latin American countries. In all of them, and especially in the Andean countries, there is a very tense intellectual life which centers about the universities and other seats of learning. Much excellent research in various directions is being carried on, but apparently no way has yet been discovered of making it known beyond the borders of Latin America. This is North America's loss fully as much as it is Latin America's.

In Bolivia Don Manuel Vicente Ballivián holds a position analogous to that held in Peru by Ricardo Palma. Ballivián is a man of great erudition, for he has devoted himself to historical and archaeological researches and to geographical explorations for many years. As a result of his long life of accomplishment he is looked up to by all Bolivia, and he received a special honor from the American Geographical Society of New York some years ago in recognition of his geographical work.

Juan Bautista Saavedra, in his work *El ayllu* (La Paz, 1909), and Alcides Arguedas, in *Pueblo enfermo* (Barcelona, 1909), presents pictures of social conditions in Bolivia which should stand as examples of literary genius long after the unfortunate circumstances they portray have perished. The great fault of Arguedas is his pessimism, a pessimism which has a terrible and fatalistic bitterness.

Analogous to and generously complementary of the Prado collection in Lima are three remarkable archaeological collections in La Paz. They belong to Don Federico Diez de Medina, Don Agustín de Rada, and the Museo Nacional (directed by Don Alberto Jáuregui y Rosquellas). Another fine collection is that of Señor Arthur Posnansky, but it was not fully in order when I saw it, so that I am unable to estimate its scientific value. Señor Posnansky, a civil engineer, has made an invaluable plan of the ruins of Tiahuanaco near Lake Titicaca. The objects in all these collections come from the lofty plateau between the lake and the deep valley in which La Paz is situated. Most of them belong to the pre-Inca cultures, but the Inca civilization and also the postconquest Indian cultures are generously represented.

Ecuador is fortunate in possessing a very enterprising group of young writers and investigators, of whom Don Jacinto Jijón y Caamaño, Don José Navarro, and Don Carlos M. Larrea are the best

known. Señor Jijón is beyond all question the rising sun in South American archaeological and historical investigation. He is a young man who belongs to two of the oldest and wealthiest families in Ecuador. He, like his associates in the Sociedad Ecuatoriana de Estudios Históricos Americanos, is a disciple of the late Archbishop of Quito, the saintly Don Federico González-Suárez. All those who have interest in the romantic past of our hemisphere will be grateful to Señor Jijón for his two books *El tesoro de Itschimbía* (London, 1912) and *Los aborígenes de Imbabura* (Madrid, 1914), as well as for his very recent *Notas acerca de los Incas en el Ecuador* (Quito, 1918). This last work is especially valuable, for it clears up a number of obscure points in Inca history. It was written in collaboration with Señor Larrea. Still another invaluable recent piece of research carried out by Señor Jijón is an intensive critical analysis of the historicity of the events related by the Ecuadorian historian, Father Juan de Velasco. It is now proved that Velasco is not trustworthy, and we shall henceforth have to depend on the writings of the late González-Suárez and on the researches of Jijón and Larrea for our information as to the pre-Hispanic history of Ecuador. Señor Navarro deserves great credit for his work in collecting and reproducing old inscriptions from various parts of Quito and other Ecuadorian cities. It is to be hoped that this sort of study, very valuable as a means of dating buildings and styles of architecture, will be carried on extensively throughout South America, Central America, and North America.

Don Alfredo Flores y Caamaño, a cousin of Jijón y Caamaño, has written *Descubrimiento histórico relativo a la independencia de Quito* (Quito, 1909), a work in which inaccessible and important data concerning the revolution against Spain are to be found.

Still more valuable for the student of Latin American history, especially for the seeker after information regarding the influences of the Napoleonic invasion of Spain on that country's American possessions, is Señor Flores's *Don José Mejía Lequerica en las cortes de Cadiz de 1810 a 1813* (Barcelona, 1914).

Similar in subject matter and in historical value is *Leyendas del tiempo heroico* (Madrid, 1918), by the well-known Ecuadorian, Manuel J. Calle.

In a word, the three Andean countries are all honored by the presence of diligent and progressive groups of earnest and capable students. In the space at my disposal it has been possible to touch on only one or two phases of the intellectual life there present. But the reader will understand that medicine, biology, journalism, geology, law, theology, and other branches of learning are all nobly represented in the Andes. I have ventured to present only those sorts of studies and those scholars with whom I have the honor to be acquainted.

GENERAL JOSEPH VILLAMIL¹

ALTHOUGH in general the services rendered by citizens of the United States to South Americans, in their efforts to free themselves from the yoke of Spain, have been recognized in various publications, it does not appear to be known outside of Ecuador that José Villamil, eminently identified with the movement for freedom, was an American citizen.

Of Spanish and French ancestry, he was born in the territory then the Spanish province of Louisiana in the year 1789. When 16 years of age he became first sergeant in the first company of Volunteer Reserves—that is, two years after the territory was purchased from France by the United States in 1803. In 1810, while visiting Cadiz, Spain, he became intimately acquainted with the Spanish-American patriots, Fernando Lorenzo de Velasco, a Mexican, and Manuel de Sarratea, of Buenos Aires, with whom he planned the emancipation of Spanish America. In his “*Reseña Histórica*” Gen. Villamil says:

With the annexation of my country to the United States, I was no longer a colonist; I was accustomed from my infancy not only to respect, but to love Spain; but the undertaking was great, bold and dangerous, and any thing having those characteristics enthuses youth.

Soon afterwards he sailed for Venezuela, arriving at the city of Maracaibo, where he became an enthusiastic revolutionist, with all the dangers and trials attending such a position, at one time being saved execution through the great influence of two of his brothers there and the interest his youth awakened in the governor, Gen. Millares.

While passing through Puerto Principe in 1815 Villamil met Bolívar, who ever after retained for him a warm respect and interest, and for whom Villamil felt such esteem that he named his son after the liberator and called one of his daughters Bolivia. During the same year he arrived at Guayaquil, where he was married to the beautiful Senorita Ana Garaicóa and became a permanent resident, his numerous descendants being well known in Ecuador. In February of the following year he descended the Guayaquil River at the time Commodore Brown, from the Navy of Buenos Aires, was at Puna with several war vessels. Villamil returned upstream, not

¹ By Dr. Frederic W. Goding, U. S. Consul General at Guayaquil, Ecuador.



Photo presented by Sr. Jorje Illingworth I, of Quayaquil

GENERAL JOSEPH VILLAMIL.

This leader of independence of Hispanic America was born in 1789 in Louisiana, where he became a sergeant of the first company of riflers shortly after the acquisition of the territory by the United States. He was the leading spirit of the revolution effected in Guayaquil in 1820 against the Spanish régime, and after lending valiant services in the struggle for freedom he remained one of the most noteworthy characters in public life of Ecuador after 1830.

without being pursued by two of the armed fleet under Brown. In his *Reseña Villamil* says:

I am convinced that Brown would have permitted me to pass, owing to my being an American citizen. He would even have done more—he would have thanked me to continue my voyage beyond, for I would then be delivering the city of Guayaquil to him without its being prepared for defense. But the idea of indifferently betraying the city to the mercy of the attacking force, whose intentions could be easily seen, without doing anything to assist it, made me ashamed. I then returned, but not without serious loss to my interests. At 10 o'clock the tide began to turn, and should I have been compelled to anchor, Guayaquil would have been surprised and captured; but a strong breeze from the south, rare in February and at that hour, saved the city.

To detain Brown by forcing him to lose the tide was of the first importance. Arriving at Punta de Piedra, which was defended by 6 or 8 cannon and a force of 14 men, Villamil, in the name of the governor, ordered the sergeant in command to send a messenger overland to Guayaquil, and to open fire upon the two vessels. The next day on reaching the city Brown found it strongly defended and he and his vessel were captured. Villamil had occupied a conspicuous part in the preparations for defense, and was later commissioned to treat with Brown as to the final arrangements and exchange of a considerable group of Spanish prisoners captured.

About the middle of the year 1820, Villamil figured as the directing genius of the revolutionary movement in Guayaquil. Arranging a ball at his home as a blind, on the night of October 1, the conspirators organized, and on the following night he was commissioned to solicit the aid of the Spanish military forces, in which project he was successful. At his house a week later, at the dinner celebrating his appointment as attorney general by the Royal Government, every patriot involved was given special instructions; and on October 20, 1820, the blow was struck which forever ended Spanish rule in Guayaquil. Two days later Villamil started on his mission to inform Lord Cochrane and Gen. San Martín of the result of the uprising. After receiving the greatest attention from these gentlemen he returned to Guayaquil accompanied by delegates to the independent government of the province, and was commissioned lieutenant colonel by Gen. San Martín. In command of a squadron of cavalry, Villamil took an active part in the defeat of the Spanish troops at Huache and other battles, later serving under the gallant Gen. Sucre until the final surrender of the royal troops.

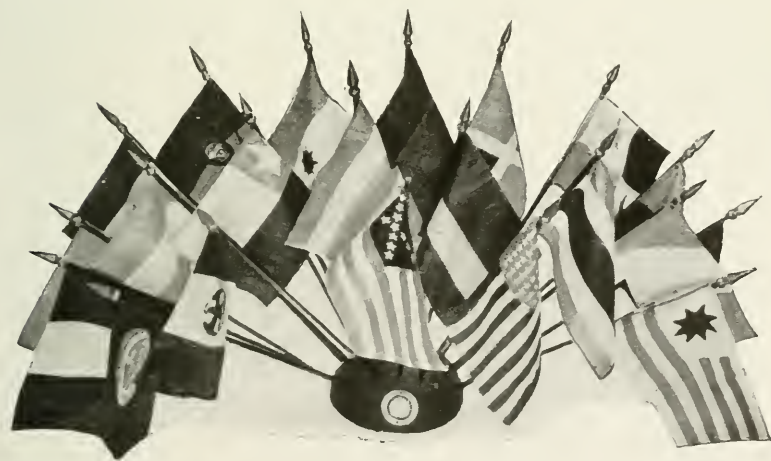
In 1830 Villamil declared the Galapagos Islands an integral part of the Republic of Ecuador, the Government concurring and taking formal possession of the archipelago February 12, 1832. Having received a grant of Floreana Island, one of the group, he estab-

lished thereon a colony, and devoted most of his remaining years and fortune to the development of the island, placing live stock and agricultural implements within reach of the settlers.

As a military man Villamil was upon various occasions chief of the military forces of the department of Guayas, chief of staff and operations and division general, the highest rank in the army register of Ecuador. In civil life he was mayor of Guayaquil, department prefect, and collector of customs at Manabi. In 1852 Gen. Urbina, the supreme chief of the Republic, called him to his cabinet as minister of war; and after the reorganization of the Government he was sent as chargé d'affaires to the United States.

After serving for several years in public affairs he retired to private life; but, although weighted with years, he offered his services to the Chilean Government on learning that the Spanish squadron was bombarding Valparaiso.

Gen. Villamil, of whom all Americans as well as Ecuadorians may well feel proud, died at Guayaquil, where his remains are buried, May 12, 1866, at the age of 77. His name occupies a prominent place in the history of Ecuador, being revered as that of one of the country's greatest patriots.

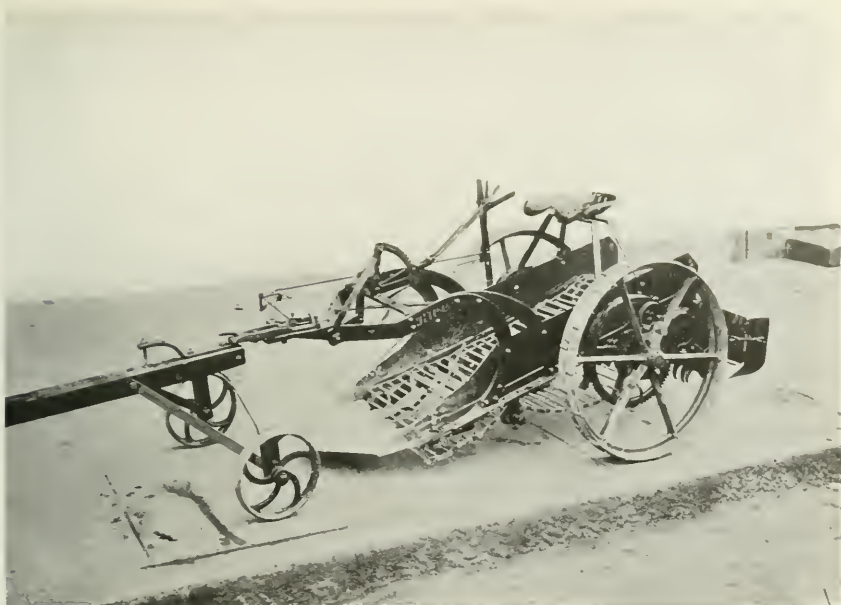


PEANUTS IN THE AMERICAS

THE story of the peanut's history was more or less of a changeable one until recent years. Its origin had been credited to nearly every land where it is grown and agriculturists had traced its course around the entire earth in order to get a true story of its life. It is now generally accepted, however, that the peanut or *arachis hypogaea* is indigenous to tropical America and more particularly to the country of Brazil. Egypt has been claimed as the land of its origin, but, as De Candolle points out, if the plant was once cultivated there it would probably still exist in that country, and also it is not mentioned in either Forskal's catalogue or in Delile's flora. The peanut has been for several centuries cultivated in Africa, and some writers maintain that the plant is indigenous to both that continent and to South America, but as it is not mentioned by any of the ancient Greek, Latin, and Arab authors it does not seem probable that that theory is true. The peanut is also cultivated in China, Cochin-China, and India, but it is believed to have been introduced there in comparatively recent times. Six or seven allied species are found in Brazil, and if the *arachis hypogaea* were not of American origin it would be the only exception to the group, which seems improbable. Numerous specimens of peanuts have been found in the prehistoric graves at Ancon, Peru; also pieces of earthenware decorated with representations of the peanut. A vessel, nearly closed except for a small opening at the top, evidently used for parching peanuts, was found with peanuts painted on the handle. This gives added proof that the peanut originated in South America.

It is interesting to note the way the peanut is supposed to have come to North America. The slave dealers, needing a food that was not bulky but still high in food value and cheap in price, loaded up with peanuts to feed to their cargo of slaves on the voyage across the Atlantic. This story is given additional weight by the fact that the Carolina and Virginia peanuts differ considerably, each, it is believed, coming from Africa but from different sections of that continent.

During the Civil War in the United States the scarcity of rations fixed the nutritious value of this nut upon the minds of individuals of both armies, and although the peanut was known in the United States during the days of colonization it was not until after the war, or about 1870, that it became of commercial importance. The growth of the peanut industry from that time up to 1900 was gradual, but since then it has grown to large proportions and the product is fast becoming an important food.



MACHINE POTATO DIGGER ADAPTED FOR HARVESTING PEANUTS.

The blade in front is arranged so as to cut the roots of the plant in the proper way.



PEANUT DIGGER IN OPERATION.

Many of the large producers of peanuts use a machine digger for harvesting. This machine will dig from 8 to 12 acres a day.



IN THE PEANUT FIELDS.

Upper picture: In stacking peanuts it is important to keep them off the ground. This is accomplished by starting the stacks on two cleats nailed to the stake 8 or 12 inches from the ground. Lower picture: Field of peanuts showing two hills after being dug.

Figures tell an interesting story of the development of the importance of the peanut. In 1889 the production in the United States was 3,588,143 bushels. During the next 10 years the crop increased over 300 per cent and 516,654 acres were planted to peanuts. In 1909, 869,887 acres were devoted to the raising of this crop, and the yield was 19,415,816 bushels, valued at \$18,271,929. Since 1910 the acreage planted to peanuts has increased more rapidly than in any preceding 10 years. Estimates show that 2,000,000 acres were planted in 1917, and in addition there has been a large increase in the prices paid for peanuts. This increase in the production and acreage of peanuts has been due to the development and improvement in machinery and methods used in handling the crop, the disseminating of information concerning its value as a food for man and beast, and the use of the by-products of peanut butter and peanut oil.

To most people the peanut is a delicacy to be bought at the fruit stands or of the vender on the street corner, but only a small part (about 25 per cent) is disposed of in this way. The peanut is a valuable food for cattle and hogs, and thousands of bushels are also shelled each year for use in confections and food products. Nor do we think usually of the food value of the peanuts we buy to be eaten merely because we like the taste. The kernels contain about 29 per cent protein, 49 per cent fat, and 14 per cent of carbohydrates, which make it a highly nutritious article of food.

The peanut belongs to the same group of plants as do the peas and beans, but it is distinguished from these in the fact that its fruit or nut grows beneath the surface of the ground. The peanut is also known as "groundnut," "ground pea," "goober pea," and under several other similar names, and properly speaking it is a pea more than a nut, the term "nut" being given because of its flavor.

The peanut is cultivated commercially in the Americas along the whole southern part of the United States from Florida to California, as far north as Washington, D. C., and in several countries of Latin America. It will grow in other places, but the best localities are those where the frost-free season is comparatively long. The peanut does best on a sandy loam with a well-drained subsoil, but the crop may be grown under a large variety of conditions. Climatic conditions require a long season without frost, a light rainfall during the growing period, abundant sunshine, and a high temperature. The Spanish peanut will mature in about 90 days under the most favorable conditions, but a longer period should be allowed for best results. Peanuts should be a rotation crop to be grown about one year in each three or four. They should, if possible, follow some well-cultivated crop that has been kept free from weeds. Corn, potatoes, clover, oats, and cowpeas make good crops to be planted on the ground to be used for peanuts. Manure does not make as good a



PICKING PEANUTS BY HAND.

Before the advent of suitable machinery, peanuts were picked entirely by hand. Formerly the hand-picked product sold for a better price, but now the price depends entirely on the grade of the nut.

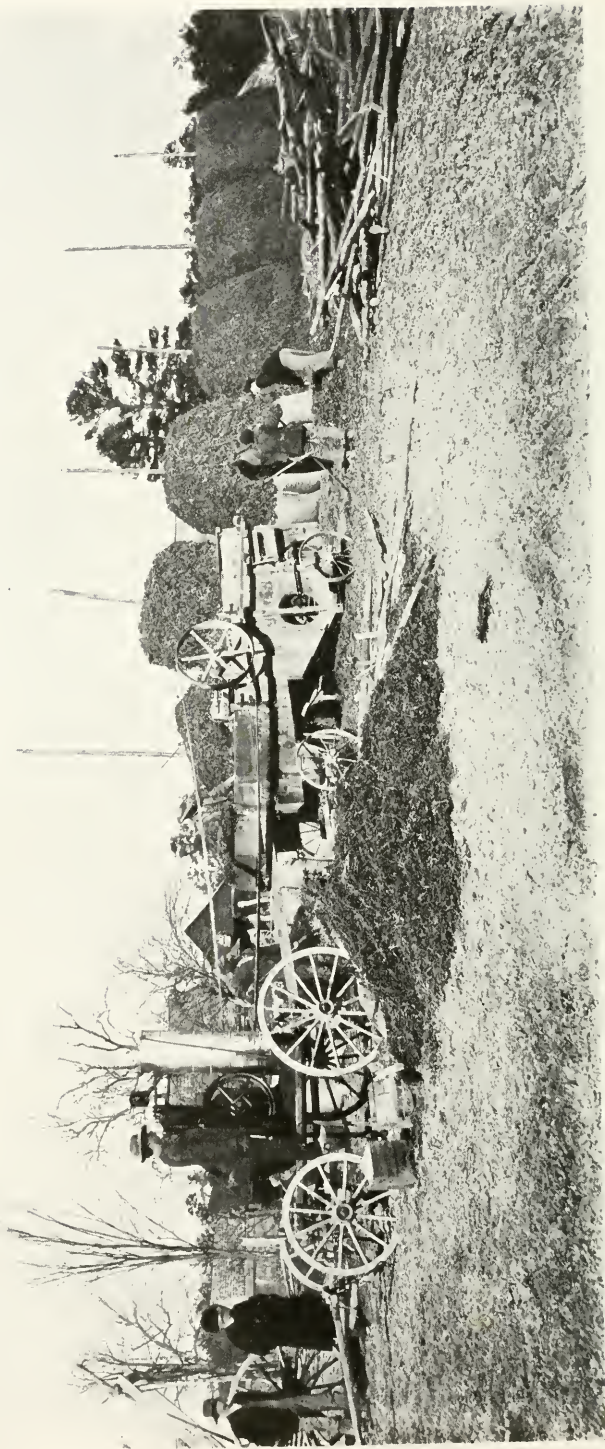
fertilizer as some commercial products. A mixture which contains nitrogen, phosphoric acid, and potash makes a good fertilizer when well mixed with the soil. Peanuts also require an abundance of lime in the soil. The plant gathers nitrogen in large quantities, which adheres to the roots in little nodules. For this reason it is practicable to leave a large part of the peanut roots in the ground at the time of harvesting. It is estimated that this nitrogen left in the ground has a fertilizing value of from \$3 to \$8 an acre.

A good grade of seed for planting a peanut crop is just as important as the selection of good seed for any other crop. Only the best of the previous year's growth should be saved for seed, for it produces a greater yield and a better plant. Although the peanut seed may be planted in the pod, it is better that they be shelled. Quicker germination will follow and there is less danger of loss, for the seed can be selected with greater care. Seeds planted in a heavy soil should not be buried too deep, and even in lighter soils they should be no deeper than 2 inches.

During the early stages of growth the plant should be well cultivated and kept free from weeds. The dirt should be loose about the plants in order to allow the tiny shoots to penetrate the ground where they form the pods. This phenomenon takes place in very few, if any, other plants. The male flowers appear and soon die, but the female flowers send forth a tiny shoot, which curves downward and penetrates the ground at the base of the plant and there forms the peanut. After the vines begin to form the pods, they should be disturbed as little as possible and care exercised not to injure the plant.

There is an exact condition of the crop determining the time that the peanut should be dug, varying only with the weather and the climate. The aim should be to dig at the time when the plants have the greatest number of mature pods. If deferred too long the pods that form first may sprout, especially if there is a period of rainy weather late in the season. An early frost, while it does not affect the pea itself, is injurious to the vines if they are to be used for forage. Modern machinery has made radical changes in harvesting the peanut as with other crops. The special type of peanut digger generally in use is a machine that digs, cleans, and bunches the peanuts and cuts off the root just below the pods and leaves the nitrogen-bearing part in the soil.

After the peanut vines have been taken from the ground and allowed to lie for a few hours they are stacked around a central stake to cure. This process should be done with care, as the peanuts are especially liable to be spoiled at this time. A stake is driven in the ground, with two small laths nailed at right angles about 8 inches above the surface. These laths keep the vines from touching



THRASHING MACHINES AT WORK.

The picking and thrashing machines have been important factors in the development of the peanut industry. One of these machines will turn out from 200 to 600 bushels in a day, depending on the size and type of the machine.

the soil. The vines should be clustered around the stake, but not too thickly, as they will mold or prevent the circulation of air. The pods are placed in the center and the vines sloping slightly outward, so that the rainwater will run off. This curing process should be continued from three to four weeks. Picking was formerly done by hand, and even after the advent of picking machinery the hand-picked product was sold for a better price, but in the last few years the price has only varied according to the grade of the peanut. Care must be taken in picking not to break the pods, as those that are cracked will not keep for a very long time and consequently are unmarketable. The nuts have some dirt adhering to the pods, but this is cleaned off at the peanut factory, where they are also polished with white marble dust to improve their appearance.

Several varieties of peanuts are grown in the United States and Latin America and each has its use. The Virginia Bunch and Virginia Runner, having a large pod with usually two seeds, are the ones used for vending purposes where the peas are roasted and sold from fruit stands. The Spanish and North Carolina peanut, somewhat smaller, are also used for this purpose, but not so extensively. The Spanish and Valencia are used considerably for stock-feeding purposes, as they are easier to grow and may be produced under a greater variety of conditions. For shelled peas the smaller nuts of the large-podded stock are used, also the Spanish, North Carolina, and the Tennessee Red varieties.

Within the last few years efforts have been made on the part of the governments of some of the Latin-American countries to have the peanut cultivated to a greater extent. Nearly all the countries grow the peanut, but they do not seem to realize its importance as a commercial crop.

Argentina has been a large peanut-importing country, and only recently has much attention been paid to developing the industry within its own borders. In 1913 a total of over 7,000,000 pounds of peanuts were imported into Argentina, mainly from China, France, Africa, and the British possessions. In that same year only 62,963 acres were planted to peanuts. In 1918, however, the peanut crop of Argentina was very successful, no doubt owing to the fact that in the previous year the Government distributed free 124,796 kilos of seed.

A quotation from an Uruguayan paper gives clearly the status of the peanut in that country.

The Government's free-seed distributing committee recently gave peanuts for planting purposes to more than 400 Uruguayan farmers who manifested a desire to engage in growing this crop. As this is a new industry in the Republic, instructions concerning the planting, cultivation, and harvesting of this legume were also furnished to the persons receiving the seeds.



ROOTS OF THE PEANUT VINE.

This picture shows very well the value of the peanut plant as a nitrogen gatherer. The nodules on the roots are formed by the bacteria which collect the nitrogen. The tiny shoots which come down from the flowers and penetrate the ground to form the peanut are clearly shown. In gathering the plant care is taken to cut the root exactly as shown by the black bar so as to leave the nitrogen in the ground.

The peanut has been successfully cultivated in Paraguay and there are about seven varieties grown in that country.

In the various countries of Central American the climate is admirably suited to the cultivation of peanuts, but the people do not seem to realize their value. The United States exports annually large quantities of peanuts to Central America, and the traveler in these countries notices frequently peanut venders at the railroad stations and buys their products, thinking that he is consuming a Central-American article of food, but which in all probability came from the United States. The peanut in Mexico has been cultivated to quite an extent and in some States it is an important commodity.

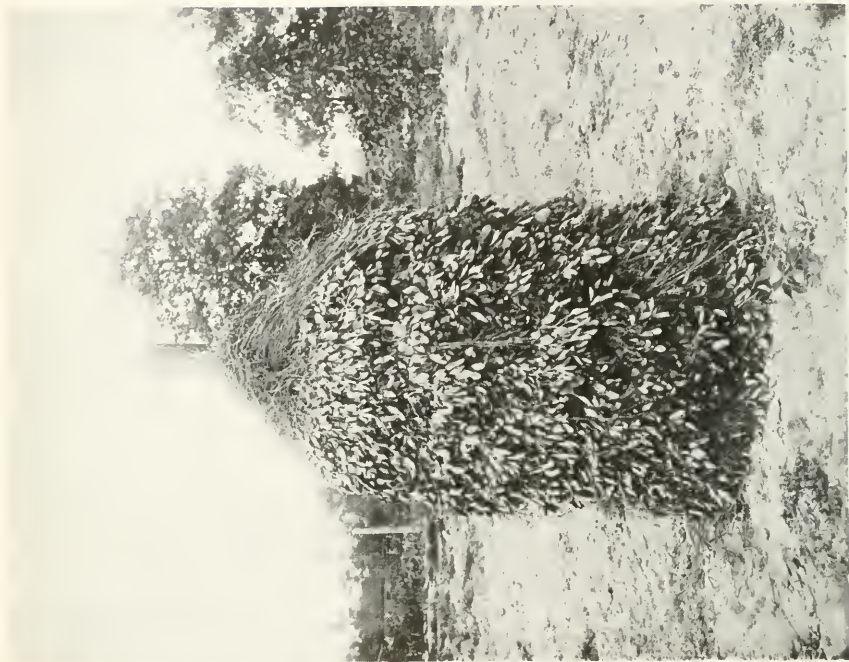
As stated before, the use of the peanut, as the majority of us know it, as a delicacy on the fruit stand, would not be a sufficient reason for its cultivation to such a large extent. The amounts used for food for cattle and hogs and for making peanut butter, peanut oil, and peanut cake far surpass the amount sold as roasted peanuts. Of course we are all familiar with salted peanuts (usually the Spanish variety) and the large use of peanuts in confections and bakery products, but we are not quite as familiar with the other phases of the peanut industry.

There are no statistics available as to the amount of peanut butter manufactured, but the quantity is large and increasing every year. Three manufacturers of peanut butter in the United States made over 7,000,000 pounds in 1916. In addition to these, there are numerous small factories, and it is estimated that about 4,000,000 bushels of peanuts go into this industry annually. The quality of peanuts used must be the very best, and extreme care is taken in their preparation. The peanuts are roasted and then cooled and blanched. The blanching consists of removing the red skin, which is done by means of brushes. The peanuts are then fed into a grinder, usually a blend of the Virginia and Spanish, as it is believed that a blend of the two makes a better butter than either used alone, and from $1\frac{1}{2}$ to 3 pounds of salt mixed with every 100 pounds of nuts. Peanut butter is very easy to make, and since many families prepare their own, the figures of production can only approximate the actual amount manufactured. The use of peanut butter is increasing each year as people begin to realize its food value. A pound of peanut butter contains one and one-half times as much protein, over three times as much fat, and three times as much fuel value as a pound of round steak. It also contains 17 per cent of carbohydrates, while steak contains none.

The manufacture of peanut oil in the United States, until very recent years, has been very little, as it is one of those industries that have grown up out of the war. In the year ending June 30, 1914, the United States imported 1,332,108 gallons of peanut oil, valued at \$915,939. The war, however, caused a shortage of animal and



A HILL OF PEANUTS AFTER HARVESTING.



PEANUTS STACKED FOR CURING.

The stack is built up as high as a man can conveniently reach and then topped off with a bunch of dry grass or weeds. This process is one of the most essential features of gathering the crop.

vegetable oils, and for the year ending December 30, 1916, we find very different figures. In that year the United States imported 2,089,801 and manufactured over 3,000,000 gallons. The method of manufacture, however, of the European peanut oil makes it a far better product than the oil produced in America. The oil manufactured here is made from unshelled nuts and has an earthy taste, which makes it undesirable for a table oil. The shells also absorb some of the oil, which, although it makes a better peanut cake, results in loss of oil, which is the more valuable product. In Europe peanut oil is made from nuts that have been shelled and carefully examined for impurities. This makes it possible to manufacture a high-grade, edible oil which does not need to be refined and an oil that has a good color and a distinct peanut flavor. The American-made oil is used mostly for packing purposes, but a valuable industry could be built up in the United States by manufacturing an oil according to the European methods and putting it on the market as a high-class edible oil at a price slightly lower than olive oil.

Cottonseed-oil mills could be used profitably for the manufacture of peanut oil, as they are already equipped with the necessary machinery, and in most cases do not get enough cotton seed to keep them busy the entire year. The manufacture of peanut oil has also had a good effect on the peanut market in general. The poorer grade of peanuts can be disposed of in this way at a fairly good price, as well as those nuts that have become rancid or spoiled by insects. The by-products of peanut-butter factories are also disposed of in the manufacture of soap oil.

The peanut industry is still in its infancy as far as opportunities for development are concerned. The demand for peanuts and peanut products is increasing rapidly. Especially is this true of peanut oil, which is a commodity, although but little known in this country, rapidly coming into favor. The growing of peanuts for stock-feeding purposes is another large opportunity for the peanut industry. Nearly every farm in the peanut-growing section could grow to advantage an acre or several acres, depending on the size of the farm, for feeding to hogs. In view of the urgent demand for pork and pork products and the high prices paid, there is every incentive for the farmers in the peanut regions to raise hogs. The fact that the public is demanding peanuts more and more is shown by the figures of production, which increased from 3,500,000 bushels in 1899 to over 40,000,000 bushels in 1916, and the price per bushel increased at the same time. The spread of information regarding the up-to-date means of cultivation which has enabled many producers to make the peanut a well-paying crop, and the aid given by many of the Latin-American governments in furnishing seed to farmers no doubt has stimulated the peanut industry and will continue to make it a lucrative business.

LATIN AMERICAN FOREIGN TRADE IN 1917—A GENERAL SURVEY.

Countries.	Imports.			Exports.			Total foreign trade.		
	1916	1917	Increase.	1916	1917	Increase.	1916	1917	Increase.
Mexico.....	1,890,000,000	1,812,000,000	\$52,000,000	1,870,000,000	1,8210,000,000	\$40,000,000	1,8290,000,000	1,8352,000,000	\$62,000,000
Guatemala.....	8,539,294	8,961,573	422,279	10,637,886	7,804,732	2,833,154	19,177,180	16,801,305	2,375,875
Salvador.....	5,823,019	6,596,812	773,793	11,604,531	16,719,166	5,114,635	17,428,370	23,513,978	6,085,608
Honduras.....	4,432,109	6,263,062	1,831,053	4,190,365	8,630,177	3,839,812	8,632,674	14,323,339	5,690,665
Nicaragua.....	4,777,397	6,363,068	1,615,471	5,284,862	5,973,536	690,394	10,002,459	12,308,324	2,305,865
Costa Rica.....	6,603,925	5,595,240	1,008,685	11,121,172	11,382,166	260,994	17,725,097	16,977,406	747,691
Panama.....	9,197,370	9,223,170	25,800	5,506,725	5,624,176	117,451	14,704,065	14,847,346	143,281
Cuba.....	248,278,279	271,279,813	10,200,595	356,571,350	396,771,945	23,001,535	604,849,629	638,031,759	33,202,130
Dominican Republic.....	11,664,130	17,400,064	5,735,934	21,527,873	22,440,580	912,707	33,132,303	39,840,614	6,708,311
Haiti.....	10,312,000	16,000,000	5,688,000	12,000,000	13,000,000	1,000,000	22,312,000	23,000,000	688,000
North American Republics.....	399,648,623	483,972,903	84,324,280	608,445,184	667,753,198	59,308,014	1,008,093,807	1,131,726,101	123,632,294
Argentina.....	210,887,042	178,933,037	31,954,005	527,045,463	533,664,948	6,619,485	737,932,565	712,597,985	25,334,520
Bolivia.....	12,128,304	20,688,498	7,560,194	39,579,073	63,069,221	23,520,148	51,707,377	83,187,719	31,480,342
Brazil.....	191,582,153	214,460,915	19,878,762	272,853,201	290,932,423	18,079,222	467,435,354	505,393,338	37,957,984
Chile.....	81,220,102	120,603,115	48,383,013	187,458,432	259,985,485	72,527,053	208,678,534	389,588,610	120,910,076
Colombia.....	20,660,137	23,333,826	2,673,689	31,654,277	40,531,330	8,877,053	61,314,414	63,805,156	2,490,742
Ecuador.....	9,330,173	11,000,000	1,669,827	17,569,691	31,500,000	13,930,309	26,890,864	39,500,000	12,609,136
Paraguay.....	4,558,684	8,902,123	4,343,439	8,190,371	11,303,562	3,113,191	12,749,055	20,265,685	7,516,630
Peru.....	42,200,010	65,235,856	23,035,846	80,389,561	90,606,997	10,217,436	122,589,571	136,280,853	13,691,282
Uruguay.....	35,155,112	38,700,720	3,545,608	71,074,374	96,216,925	25,142,551	100,229,486	134,917,645	34,688,159
Venezuela.....	21,291,834	22,188,223	896,389	22,707,000	23,161,702	457,702	43,998,834	45,352,925	1,354,091
South American Republics.....	641,013,551	712,834,313	71,820,762	1,258,521,443	1,428,065,663	169,544,100	1,890,534,994	2,140,899,916	250,364,922
Total Latin America.....	1,040,662,174	1,196,807,216	156,145,042	1,866,966,627	2,065,818,801	228,852,174	2,907,628,801	3,292,626,017	384,997,216

a Estimated in part.

b Decrease.

c Estimate.

LATIN AMERICAN FOREIGN TRADE IN 1917--GENERAL SURVEY

THE foreign commerce of the 20 Latin American Republics for the year 1917 amounted to \$3,292,626,016, an increase of \$384,997,216 over the preceding year. The imports increased \$156,145,042; that is, from \$1,040,662,174 to \$1,196,807,216. The exports increased \$228,852,174; that is, from \$1,866,966,627 to \$2,095,818,801.

The trade of Latin America within 20 years has increased to more than two and a half times what it was; the exports more than three times, and the imports nearly twice, as shown by the following table:

All Latin America.

	Imports.	Exports.	Total
1917.....	\$1,196,807,216	\$2,095,818,801	\$3,292,626,017
1897.....	415,079,562	495,342,937	910,422,499
Increase.....	781,727,654	1,600,475,864	2,382,203,518
Per cent.....	188	323	262

The percentage of increase in trade, however, has not been uniform throughout the whole of the 20 Republics. It has been much greater in the northern group of 10 Republics, comprising Mexico, Guatemala, Salvador, Honduras, Nicaragua, Costa Rica, Panama, Cuba, Dominican Republic, and Haiti, than in the southern group, likewise of 10, comprising Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela. That of course is not to say that some of the republics in the second group have not increased their percentages of trade as largely as any of the northern group, but that the group as a whole has not made as great a comparative advance in trade.

Latin Republics of North America.

	Imports.	Exports.	Total.
1917.....	\$474,749,733	\$662,129,022	\$1,136,878,755
1897.....	80,848,144	116,711,169	197,559,313
Increase.....	393,901,589	545,417,853	939,319,442
Per cent.....	487	467	475

South American Republics.

	Imports.	Exports.	Total.
1917.....	\$722,057,483	\$1,433,689,779	\$2,155,747,262
1897.....	334,231,418	378,631,768	712,863,186
Increase.....	387,826,065	1,055,058,011	1,442,884,076
Per cent.....	116	278	202

In 1897 Panama formed part of Colombia. Therefore in the tables above it is included with the southern instead of with the northern group, where it properly belongs. In all other tables in this survey Panama is included with the northern group.

CHARACTER OF IMPORTS AND EXPORTS.

The bulk of imports of the Latin American Republics are of manufactures, other than foodstuffs, ready for consumption. Of commodities not so comprehended, the chief are lumber, gold, mineral oils, iron and steel construction material, flour, canned foods, and some unwrought iron, steel, copper, and other metals. Of the manufactured articles not food, which comprise the bulk of the imports, the range is very large, covering practically all the finished manufactured products known in Europe or in the United States—textiles, leather manufactures, furniture, household utensils, office appliances, tools, hardware, machinery, especially of the lighter kind, agricultural implements, mining supplies and tools, engines, motors, glassware, telephonic, telegraphic, and other electrical apparatus and material, and paper.

Of the more highly manufactured food products, the chief are edible oils, canned vegetables, meats, and fish, sweets and jams, edible pastes, spices and condiments, wines and liquors. In countries not producing the same, there are imports of sugar, tobacco, and fruits.

There is a remarkable uniformity in the imports of all the countries. As a general rule what can be sold in Cuba or Mexico can also be sold in Argentina or Chile.

On the export side there is, however, a wide divergence between the exports of one country and those of another. In general all of these exports may be classified as raw materials and primary food products. With the exception of Argentina, Uruguay, and Chile, food exports in general are tropical or subtropical products, such as coffee, cane sugar, cacao. The food exports of the three countries—Argentina, Uruguay, and Chile—are however of the same character as the food exports of the United States—meats and grain. The principal exports of the countries are as follows:

Mexico.—Gold, silver, antimony, mercury, copper, lead, zinc, mineral oils, sisal, hides, and skins. There are some exports of rubber, woods, peas, and beans.

Guatemala.—Coffee, hides, woods, bananas.

Salvador.—Coffee, silver, gold, indigo, sugar.

Honduras.—Gold, silver, bananas.

Nicaragua.—Coffee, woods, rubber, sugar.

Costa Rica.—Coffee, bananas, gold, silver.

Panama.—Bananas, ivory nuts, coconuts, rubber.

Cuba.—Sugar, molasses, distillates, tobacco, iron and copper ore, woods, fruits, hides and skins.

Dominican Republic.—Sugar, cacao, tobacco, coffee, bananas, hides.

Haiti.—Coffee, cacao, honey, cotton, cotton seed, logwood.

Argentina.—Frozen beef and mutton; hides, wool, sheepskins, goatskins, bristles, canned meats, beef scrap, tallow, butter, grease, bones, wheat, flour, corn, linseed, oats, hay, bran, quebracho.

Bolivia.—Tin, silver, bismuth, copper, rubber, coco, wolframite.

Brazil.—Coffee, rubber, hides, yerba mate, cacao, tobacco, skins, sugar, gold, manganese, cotton, cotton seed, beef, bran, monazite sand.

Chile.—Nitrate of soda, copper, silver, fruits and grains; hides, wool, fur skins.

Colombia.—Coffee, bananas, tobacco, ivory nuts, rubber, cacao.

Ecuador.—Cacao, ivory nuts, rubber, coffee, gold, hides.

Paraguay.—Hides, quebracho, yerba mate, tobacco, fruits.

Peru.—Copper, vanadium, wolframite, rubber, sugar, cotton, wool, guano, hides.

Uruguay.—Wool, hides, beef, tallow, hair, wheat, flour.

Venezuela.—Coffee, cacao, rubber, hides, goatskins, gold, meats, copper, sugar.

TRADE BEFORE AND DURING THE WAR.

Comparing the year 1917 with the last full year before the war, 1913, there was a decrease in all Latin American imports of 9 per cent and an increase in exports of 35 per cent. In the northern group of countries there was an increase in both exports and imports, 70 per cent in the former and 60 per cent in the latter. In the southern group there was a decrease of 30 per cent in imports and an increase of 23 per cent in exports as shown by the tables following:

DISTRIBUTION OF TRADE—IMPORTS.

LATIN AMERICAN IMPORTS FROM LEADING COMMERCIAL COUNTRIES.

Countries.	Total from all countries.			United Kingdom.			France.			Spain.			United States.		
	1917			1916			1917			1916			1917		
	1916	1917	1918	1916	1917	1918	1916	1917	1918	1916	1917	1918	1916	1917	1918
Mexico.....	1 891,000,000	1 812,000,000	1 891,573	1 89,000,000	1 87,000,000	1 85,500,000	1 82,000,000	1 82,000,000	1 82,000,000	1 82,000,000	1 84,000,000	1 80,000,000	1 815,000,000	1 7,200,000	1 7,200,000
Guatemala.....	8,339,294	8,991,573	8,991,573	11,000,000	11,000,000	186,893	140,000	140,000	140,000	140,000	140,000	3,535,107	3,535,107	3,535,107	3,535,107
Salvador.....	5,823,019	6,796,812	6,796,812	1,338,700	1,338,700	316,136	310,150	310,150	310,150	310,150	310,150	140,806	140,806	140,806	140,806
Honduras.....	4,452,019	6,293,162	6,293,162	1,000,000	1,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	25,000,000	25,000,000	25,000,000	25,000,000
Nicaragua.....	4,777,367	6,393,068	6,393,068	610,522	610,522	202,205	249,359	249,359	249,359	249,359	249,359	32,407	32,407	32,407	32,407
Costa Rica.....	6,603,925	5,345,240	5,345,240	790,851	790,851	180,228	137,973	137,973	137,973	137,973	137,973	112,785	112,785	112,785	112,785
Panama.....	9,197,370	9,223,170	9,223,170	1,297,149	1,297,149	143,243	103,840	103,840	103,840	103,840	103,840	81,917	81,917	81,917	81,917
Cuba.....	248,278,379	271,279,814	271,279,814	19,230,658	15,377,069	5,630,905	6,289,418	6,289,418	6,289,418	6,289,418	13,451,772	10,162,698	14,329,351	14,329,351	14,329,351
Dominican Republic.....	11,664,430	17,400,004	17,400,004	481,305	603,111	152,358	190,580	190,580	190,580	151,451	193,871	10,162,698	14,329,351	14,329,351	14,329,351
Haiti.....	10,312,000	1 10,000,000	1 10,000,000	719,939	1 790,000	467,336	1 500,000	1 500,000	1 500,000	1 280,000	1 300,000	8,775,064	1 7,700,000	1 7,700,000	1 7,700,000
North American Republics.....	399,648,623	483,972,903	483,972,903	34,860,138	28,893,795	13,129,354	9,991,320	9,991,320	9,991,320	18,391,179	20,628,784	293,687,735	375,125,346	375,125,346	375,125,346
Per cent of imports.....	100.00	100.00	100.00	8.72	5.76	3.28	2.06	2.06	2.06	4.60	4.26	75.48	77.51	77.51	77.51
Argentina.....	210,887,042	178,933,037	178,933,037	59,446,429	39,035,403	14,519,089	10,637,830	10,637,830	10,637,830	13,073,093	12,939,416	61,626,397	64,989,021	64,989,021	64,989,021
Bolivia.....	12,188,301	20,088,498	20,088,498	1,617,029	12,600,000	246,428	1 420,000	1 420,000	1 420,000	173,409	1 330,000	3,063,971	1 6,500,000	1 6,500,000	1 6,500,000
Brazil.....	191,882,153	211,460,915	211,460,915	39,667,500	38,618,706	10,117,755	8,568,961	8,568,961	8,568,961	2,291,233	2,891,202	76,238,664	101,091,945	101,091,945	101,091,945
Chile.....	191,220,102	129,693,115	129,693,115	20,049,541	23,565,591	3,462,373	5,152,005	5,152,005	5,152,005	2,082,746	1 400,000	34,478,956	63,534,755	63,534,755	63,534,755
Colombia.....	28,660,127	23,333,826	23,333,826	17,500,000	17,000,000	3,600,000	1 500,000	1 500,000	1 500,000	1 700,000	1 750,000	1 16,500,000	1 14,500,000	1 14,500,000	1 14,500,000
Ecuador.....	9,530,173	2 11,000,000	2 11,000,000	2,388,795	2 2,890,000	389,212	2 255,000	2 255,000	2 255,000	192,160	2 610,000	5,351,270	2 6,570,000	2 6,570,000	2 6,570,000
Paraguay.....	4,358,084	8,902,223	8,902,223	1,711,303	2,609,346	71,010	105,000	105,000	105,000	175,891	540,778	5,501,229	1 515,000	1 515,000	1 515,000
Peru.....	42,290,010	63,628,856	63,628,856	7,272,042	9,402,477	953,847	1,094,999	1,094,999	1,094,999	826,778	1,798,038	24,896,592	42,732,571	42,732,571	42,732,571
Uruguay.....	35,135,112	38,700,720	38,700,720	7,046,889	6,034,393	1,752,682	1 429,274	1 429,274	1 429,274	2,443,772	2,633,097	8,810,690	11,009,259	11,009,259	11,009,259
Venezuela.....	21,291,834	22,188,223	22,188,223	4,630,347	3,634,382	995,004	949,771	949,771	949,771	1,158,110	1,267,061	12,958,727	15,361,807	15,361,807	15,361,807
South American Republics.....	641,013,551	712,834,313	712,834,313	151,330,088	135,391,498	33,135,448	29,237,751	29,237,751	29,237,751	23,337,165	27,742,592	245,039,475	328,101,962	328,101,962	328,101,962
Per cent of imports.....	100.00	100.00	100.00	23.61	18.99	5.17	4.10	4.10	4.10	3.61	3.81	38.23	46.02	46.02	46.02
Total of the 20 Republics.....	1,040,662,174	1,196,807,216	1,196,807,216	186,190,226	164,285,293	46,261,802	39,230,071	39,230,071	39,230,071	11,728,344	18,371,376	538,727,230	703,230,398	703,230,398	703,230,398
Per cent of imports.....	100.00	100.00	100.00	17.88	13.73	4.45	3.28	3.28	3.28	4.01	4.04	51.77	58.76	58.76	58.76

DISTRIBUTION OF TRADE—EXPORTS.

LATIN AMERICAN EXPORTS TO LEADING COMMERCIAL COUNTRIES.

Countries.	Total from all countries.		United Kingdom.		France.		Spain.		United States.	
	1916	1917	1916	1917	1916	1917	1916	1917	1916	1917
Mexico.....	1 \$170,000,000	1 \$210,000,000	1 \$22,000,000	1 \$30,000,000	1 \$3,500,000	1 \$3,000,000	1 \$1,000,000	1 \$2,000,000	1 \$110,000,000	1 \$140,000,000
Guatemala.....	10,637,880	7,809,732	80,087	165,000	836	836	47,568	135,000	8,668,573	17,600,000
Salvador.....	11,604,751	16,710,166	67,253	269,688	2,779,179	3,492,441	90,428	75,506	4,102,410	10,042,771
Honduras.....	4,190,565	8,090,177	10,000	10,000	1,600,000	19,113	13,000	.....	13,000,000	7,679,281
Nicaragua.....	3,284,862	5,973,256	37,535	2,363	925,714	488,383	27,137	45,707	3,730,952	5,092,469
Costa Rica.....	11,121,172	11,382,166	3,608,408	2,406,101	93,418	31,886	60,688	1,138,216	6,830,977	8,119,295
Panama.....	3,506,725	5,624,176	35,087	7,712	.....	.....	336	359	5,360,788	5,527,913
Cuba.....	356,371,350	366,771,915	52,776,331	73,583,796	13,030,856	11,616,630	30,288,125	13,546,199	250,090,418	257,373,113
Dominican Republic.....	22,440,580	22,440,580	105,017	206,424	287,799	293,690	1,801,000	207,927	17,412,088	17,946,787
Haiti.....	12,000,000	113,000,000	1,100,000	1,100,000	14,000,000	14,200,000	1,500,000	1,400,000	13,000,000	14,000,000
North American Republics.....	608,445,184	667,753,198	89,906,738	107,611,134	21,623,832	23,112,123	32,097,283	17,448,914	414,196,206	463,381,629
Per cent of exports.....	100.00	100.00	11.49	16.12	4.05	3.47	5.28	2.61	68.07	69.39
Argentina.....	527,045,463	533,664,918	151,962,612	156,021,608	62,795,196	70,392,151	8,306,797	8,860,553	110,003,640	156,432,641
Bolivia.....	39,579,073	63,099,221	25,716,341	36,117,329	426,320	149,376	6,299	15,000	11,298,619	10,655,111
Brazil.....	272,853,201	290,932,423	31,467,850	36,676,906	42,876,945	40,214,722	2,158,368	4,015,400	124,919,714	134,131,363
Chile.....	187,458,432	259,985,495	48,146,999	65,388,670	11,088,469	11,657,551	1,569,736	12,000,000	92,033,567	155,006,103
Colombia.....	31,654,277	40,531,330	660,877	1,700,000	403,915	159,000	95,314	1,300,000	27,293,608	130,000,000
Ecuador.....	17,569,691	218,500,000	3,550,071	2,600,000	2,171,999	2,200,000	7,114,508	2,550,000	8,552,482	213,500,000
Paraguay.....	8,190,371	11,363,562	77,624	38,953	126,022	311,928	301,420	1,028,661	8,257,287	8,358,911
Peru.....	80,389,561	90,606,997	14,394,551	18,432,770	480,405	425,065	3,459	8,612	50,565,066	53,180,103
Uruguay.....	71,074,374	96,216,925	13,827,770	19,358,161	12,677,211	16,180,680	3,049,175	4,686,135	16,493,601	26,218,746
Venezuela.....	22,707,000	23,161,702	1,386,279	1,143,004	4,458,288	2,863,364	2,029,251	2,336,639	11,795,771	12,792,581
South American Republics.....	1,258,521,443	1,428,065,603	291,210,601	321,497,601	140,507,213	144,941,925	18,127,597	23,796,152	453,213,385	592,275,562
Per cent of exports.....	100.00	100.00	15.43	22.72	11.17	10.15	1.47	1.67	36.00	41.47
Total of the 20 Republics.....	1,806,906,627	2,095,818,801	384,117,342	432,108,735	165,131,075	168,087,048	50,521,880	41,245,066	807,109,591	1,055,657,191
Per cent of exports.....	100.00	100.00	20.57	20.61	8.54	8.02	2.71	1.97	46.11	50.37

1 Estimate.

2 Estimated in part.

All Latin America.

	Imports.	Exports.	Total.
1917.....	\$1,196,807,216	\$2,095,818,801	\$3,292,626,017
1913.....	1,321,861,199	1,552,750,952	2,874,612,151
Increase.....	¹ 125,053,983	543,067,849	418,013,866
Per cent.....	9	35	14

Latin Republics of North America.

1917.....	\$483,972,903	\$667,753,198	\$1,151,726,101
1913.....	391,552,778	392,779,586	694,332,364
Increase.....	182,420,125	274,973,612	457,393,737
Per cent.....	60	70	66

South American Republics.

1917.....	\$712,834,313	\$1,423,065,603	\$2,140,899,916
1913.....	1,020,308,421	1,159,571,366	2,180,279,787
Increase.....	¹ 307,474,108	238,094,237	545,568,345
Per cent.....	30	23	25

¹ Decrease.

A more correct view, however, of the effects of the war on Latin-American trade can be had by taking, instead of a single year during the war and a single year before the war, the period of three full years of the war—1915, 1916, and 1917—and the period of three full years preceding the war—1911, 1912, and 1913. For the whole of Latin America this last comparison shows a decrease in imports of 18 per cent and an increase in exports of 27 per cent. In the first, or northern group, there was an increase both in imports and in exports—36 per cent in the former and 55 per cent in the latter—while in the southern group there was a decrease in imports of 34 per cent, and an increase in exports of 18 per cent, all of which is more clearly shown by the three tables which follow:

All Latin America.

	Imports.	Exports.	Total.
Three years before the war:			
1911.....	\$1,159,490,516	\$1,283,232,640	\$2,442,723,156
1912.....	1,212,512,578	1,573,533,307	2,816,045,885
1913.....	1,321,861,199	1,552,750,952	2,874,612,151
Total.....	3,723,864,293	4,409,516,899	8,133,381,192
Three years during the war:			
1915.....	809,925,700	1,658,469,391	2,468,395,091
1916.....	1,040,662,174	1,869,966,627	2,907,628,801
1917.....	1,196,807,216	2,095,818,801	3,292,626,017
Total.....	3,047,395,090	5,621,254,729	8,668,649,819
Increase during war.....	¹ 676,469,203	1,211,737,830	535,268,627
Per cent.....	18	27	7

Latin Republics of North America.

	Imports.	Exports	Total.
Three years before the war:			
1911.....	\$272,532,283	\$341,131,961	\$613,664,244
1912.....	282,026,482	396,537,731	678,564,213
1913.....	301,552,778	392,779,586	694,332,364
Total.....	856,111,543	1,130,449,278	1,986,560,821
Three years during the war:			
1915.....	285,555,355	481,731,975	767,287,330
1916.....	399,648,623	608,415,184	1,008,063,807
1917.....	483,972,903	667,753,198	1,151,726,101
Total.....	1,169,176,881	1,757,933,357	2,927,110,238
Increase during war.....	313,065,338	627,484,079	940,549,417
Per cent.....	36	55	47

South American Republics.

Three years before the war:			
1911.....	\$886,958,233	\$942,100,679	\$1,829,058,912
1912.....	960,186,066	1,176,995,576	2,137,481,672
1913.....	1,020,308,421	1,159,971,366	2,180,279,787
Total.....	2,867,752,750	3,279,067,621	6,146,820,371
Three years during the war:			
1915.....	524,370,345	1,176,734,326	1,701,104,671
1916.....	641,013,551	1,258,521,443	1,899,534,994
1917.....	712,834,313	1,428,065,693	2,140,899,916
Total.....	1,878,218,209	3,863,321,372	5,741,539,581
Increase during war.....	1,989,534,541	584,253,751	1,405,280,790
Per cent.....	134	18	16

¹ Decrease.

DISTRIBUTION OF TRADE.

In the three years before the war—1911, 1912, and 1913—Latin American trade with the United States, both exports and imports, amounted to \$2,361,088,613; with the United Kingdom, \$1,839,556,224; with Germany \$1,165,255,555; with France, \$674,-914,165.

For the three years during the war—1915, 1916, and 1917—the same trade with the United States amounted to \$4,203,192,961, an increase of 78 per cent; with the United Kingdom, \$1,701,816,879, a decrease of 7 per cent; with France, \$566,403,416, an increase of 1.5 per cent. German trade disappeared entirely, except a small clandestine trade through other countries.

In the northern group the three years' trade before the war, both exports and imports, was: With the United States, \$1,264,200,069; with the United Kingdom, \$230,901,114; with Germany, \$173,-069,427; with France, \$117,142,637. The same trade for the three years during the war was: With the United States, \$2,066,094,375; with the United Kingdom, \$363,508,470; with France, \$97,044,533. In this group the trade with the United States increased \$791,894,-306; with the United Kingdom, \$132,607,356; and decreased with France \$20,098,104. German trade disappeared.

The northern group increased its takings in imports from the United States by nearly \$400,000,000, and decreased its takings

from the United Kingdom by nearly \$15,000,000, and from France nearly \$22,000,000. On the side of exports the group increased its sales to the United States by over \$400,000,000, to the United Kingdom by over \$147,000,000, and to France over \$1,600,000.

In the southern group the three years' trade before the war, both exports and imports, was: With the United States, \$1,096,888,544; with the United Kingdom, \$1,608,655,110; with Germany, \$992,186,128; with France, \$557,771,528. The same trade for the three years during the war was: With the United States, \$2,137,098,586; with the United Kingdom, \$1,338,348,409; with France, \$469,538,883. In this group the trade with the United States increased \$1,040,210,042; with the United Kingdom, decreased \$270,346,701; with France, decreased \$88,232,645.

The southern group increased its takings in imports from the United States \$300,000,000, and decreased its takings from the United Kingdom nearly \$400,000,000, and from France over \$160,000,000. On the side of exports the group increased its sales to the United States by more than \$700,000,000, to the United Kingdom by more than \$127,000,000, and to France by \$75,000,000.

Latin-American Republics of North America—Imports.

	United Kingdom.	Germany.	France.	United States.
Three years before the war:				
1911.....	\$36,272,274	\$28,013,090	\$18,206,642	\$146,239,580
1912.....	37,047,804	28,975,019	19,368,283	151,117,848
1913.....	37,202,550	29,927,208	20,434,281	163,391,767
Total.....	110,522,628	86,915,317	58,009,206	460,749,195
Three years during the war:				
1915.....	31,920,802	.....	13,162,469	184,741,115
1916.....	34,860,138	.....	13,129,354	293,687,755
1917.....	28,893,795	.....	9,991,320	375,125,346
Total.....	95,674,735	.....	36,283,143	853,554,216
Three years' increase.....	¹ 14,847,893	.....	¹ 21,726,063	392,805,021
Per cent.....	¹ 13	.....	¹ 38	85

South American Republics—Imports.

	United Kingdom.	Germany.	France.	United States.
Three years before the war:				
1911.....	\$262,099,378	\$166,057,707	\$77,470,841	\$129,701,069
1912.....	271,596,755	179,183,276	84,009,125	153,363,245
1913.....	285,555,025	188,900,663	89,520,389	167,523,500
Total.....	819,251,158	534,141,646	251,000,355	450,587,814
Three years during the war:				
1915.....	134,893,988	.....	25,935,543	157,281,670
1916.....	151,330,088	.....	33,135,448	245,039,475
1917.....	135,391,498	.....	29,237,751	328,104,962
Total.....	421,615,574	.....	88,308,742	730,426,107
Three years' increase.....	¹ 397,635,584	.....	¹ 162,691,613	279,838,292
Per cent.....	¹ 48	.....	¹ 65	62

¹Decrease.

Latin-American Republics of North America—Exports.

	United Kingdom.	Germany.	France.	United States.
Three years before the war:				
1911.....	\$31,761,559	\$25,509,399	\$19,522,402	\$245,104,886
1912.....	40,801,499	30,466,610	20,444,921	284,694,103
1913.....	47,815,428	30,178,101	19,166,108	273,651,875
Total.....	120,378,486	86,154,110	59,133,431	803,450,874
Three years during the war:				
1915.....	70,315,863	.....	12,995,435	334,962,324
1916.....	89,906,738	.....	24,623,832	414,196,206
1917.....	107,611,134	.....	23,142,123	463,381,629
Total.....	267,833,735	.....	60,761,390	1,212,540,159
Three years' increase.....	147,455,249	.....	1,627,959	409,089,285
Per cent.....	122	.....	2	51

South American Republics—Exports.

	United Kingdom.	Germany.	France.	United States.
Three years before the war:				
1911.....	\$236,722,421	\$139,392,981	\$97,968,551	\$194,918,560
1912.....	270,693,412	156,625,332	103,831,319	247,094,781
1913.....	281,988,119	162,026,169	104,971,303	204,287,389
Total.....	789,403,952	458,044,482	306,771,173	646,300,730
Three years during the war:				
1915.....	297,984,630	.....	95,579,973	341,183,532
1916.....	294,210,604	.....	140,507,243	453,213,885
1917.....	324,497,601	.....	144,944,925	592,275,562
Total.....	916,692,835	.....	381,050,141	1,386,672,479
Three years' increase.....	127,288,883	.....	74,278,968	730,371,759
Per cent.....	16	.....	24	113



LORADO TAFT¹



TEACHER, author, lecturer, artist, Lorado Taft is one of the most versatile as well as prominent of the sculptors of the United States. By his own words he has told us what the mission of the sculptor is, and surely no one has carried out that mission better than himself. "It has not been vouchsafed us to be masters of articulate speech," he says, "but we would tell you in words of bronze and marble the things that seem to us most worth while, most enduring, most exalted, or most poignant. Do you care to listen?"

Lorado Taft, a cousin of ex-President Taft, was born in Elmwood, Ill., on April 29, 1860. His parents were New Englanders and from his mother the artist inherited his talent. In 1879 he was graduated from the Illinois State University and soon after, like most other prominent American sculptors, he went abroad and studied three years in Paris at the École des Beaux Arts. On returning to America he settled in Chicago and has made his home there ever since.

The early years of Mr. Taft's professional career were somewhat conditioned by the naïf demands and appreciations of a new and simple society. In such surroundings one naturally makes busts of the living and dead, whether distinguished or nondistinguished, and executes soldiers' monuments. But the World's Columbian Exposition at Chicago in 1893 gave the young sculptor his chance, and he grasped the opportunity by his contribution of two tall decorative groups to flank the entrance to Horticultural Hall—"The Sleep of the Flowers" and "The Awakening of the Flowers." Mr. Taft was awarded the designer's medal at this exhibition. An analogous contribution was made for the St. Louis Exhibition; two groups, with outstanding figures representing "The Mountain" and "The Prairie."

In later years the sculptor seemed to have left the merely decorative side of his art behind him, and began to penetrate deeper into the more realistic things in human life. His group, the "Solitude of the Soul," exhibited at the St. Louis World's Fair, seems to mark the transition to this newer stage. This presents four figures, two male and two female, partly imbedded in and partly detached from a central core. This creation in marble is at the art Institute in Chicago.

Mr. Taft's next important work was a fountain group of five female figures called "The Great Lakes"—a figure drawn from his

¹ English version of the article of the "Sculptors of the Americas" series appearing in the December Spanish edition of the Bulletin.



BLACKHAWK.

Lorado Taft's celebrated statue of the great Indian chief, one of the first great statues constructed of concrete, Oregon, Ill.



ETERNAL SILENCE.

A bronze statue in Graceland Cemetery, Chicago. It breathes a spirit of awe, and carries the suggestion of the unknown life beyond.



THE SOLITUDE OF THE SOUL.

With sealed eyes and groping gestures these typical personages show that not even the closest intimacy may insure complete understanding, and they embody the touching, disquieting truth that each one of us, despite the best will on all sides, must pass through this life more or less alone.

own environment. This subject, so clear and simple—so inevitable, merely awaited the man, and Lorado Taft accomplished his task in a manner that could hardly be excelled. Recognition, both general and official, followed with gratifying quickness. An enlarged copy of "The Great Lakes," known as the "Ferguson Fountain of the Great Lakes," a graceful and appropriate work, was erected to adorn the south side system of Chicago's parks and boulevards. This and another of Mr. Taft's works, the "Fountain of Life," erected in the city of Chicago, in commemoration of the hundred years peace between England and America, were made possible by the private beneficence of Mr. B. F. Ferguson, a retired lumber merchant of that city, who bequeathed \$1,000,000 to be used in the erection of enduring monuments and statuary to adorn the public parks of Chicago.

A figure that occupied the central place of honor at the National Sculpture Society's exhibition at Baltimore in 1908 was "The Blind," a group of 10 or 12 sightless figures grouped about a mother holding a little infant in her arms. This group illustrates vividly the crucial moment in Maeterlinck's play, "Les Aveugles." Some see in it merely an illustration of a well-known tale, but to others it conveys larger significance. While inspired by a narrative it seems to interpret wordly experience—the walking by faith, the unknown future, the leadership of a little child, the outreaching for things unseen; aspiration, progress. The figures, without being huddled, are brought into a compact related mass, and though broadly treated, display delicate beauty in their modeling. This group, though the embodiment of profound thought, has also a plastic expression; it is tragic and dramatic, and while it creates a feeling of awe, it charms and uplifts.

Among the splendid busts that Taft has made may be mentioned those of two Illinois worthies, Gov. Oglesby and Gen. Logan, for the Memorial Hall of the Grand Army of the Republic, in the public library building in Chicago. An important work is the colossal statue of Washington for the campus of the State University at Seattle. It represents him in a flowing cape and the sword of state by his side. It is a figure that truly pictures his great dignity and power. A replica of the famous fountain of Paducah, along with several other of Taft's works, were exhibited at the outdoor art exhibition held in Chicago in 1909. The Paducah fountain, at Paducah, Ky., erected in honor of the Indian's memory, represents the figure gazing straight ahead as if he were watching for a foe. A remarkable cemetery memorial is the one to Henry T. Graves, of Chicago. It is named "The Eternal Silence"—an unusually impressive conception. The figure is of heroic size and stands out clearly against a tablet of dark highly polished granite.



"DISCOVERY"—DETAIL FROM THE COLUMBUS MEMORIAL FOUNTAIN, WASHINGTON, D. C.

The Columbus Memorial, erected to the great discoverer on the plaza of the Union Station at Washington, D. C., is a semicircular fountain 70 feet wide and 65 feet from front to rear, adorned with a great statue of Columbus and appropriate allegorical figures.



THE BLIND.

Suggested by Maeterlinck's "Les Aveugles." The sightless figures depend upon the infant child, held high in the mother's arms, for guidance and are pressing close to one another, reaching out timidly and appealingly, and yet moving on.



THE SPIRIT OF THE GREAT LAKES.

The five great lakes are represented in this picture. High standing Superior starts the descending stream, passing it on to Michigan, Huron, and Erie, while Ontario, crouching at the foot of the others, sends the water on its way to the sea.



PADUCAH.

The fountain at Paducah, Ky., erected in honor of the Indian chief after whom the town was named. To the left may be seen one of the sculptor's lesser works.

Sculpture alone, however, has not occupied all of Mr. Taft's life. The lecture platform and the railway train claim a good share of his time. He has delivered some 2,000 lectures on art subjects. Since 1886 he has been instructor at the Art Institute of Chicago, and from 1892 until 1902 he was a lecturer in the university extension department of the University of Chicago; and even to-day he is often traveling with his paraphernalia and his assistants, engaged in demonstrating to North, South, East, and West what a sculptor's studio is like and what goes on within it.

A memorial to Christopher Columbus, designed by Lorado Taft, made possible by the joint aid of the Knights of Columbus and the Congress of the United States, was erected in 1912 on the plaza of the Union Station at Washington, D. C. Mr. Taft's design was given first award by a committee from the House and Senate in a competition among artists in this country and in Europe. The principal feature of the architectural design is a stone shaft, 45 feet high, which is surmounted by a globe of the world. This is a background for the figure of Columbus, who is represented with arms folded in an attitude of meditation standing on the prow of a ship. Just below the statue is the figurehead of a ship—a female figure typifying the spirit of discovery. On either side of the shaft are two figures, an Indian, representing the New World, and a patriarchal Caucasian typical of the Old World. The globe at the top, supported by four American eagles, is to represent the influence that Columbus had on the growth of popular knowledge concerning the shape of the earth. The rear of the shaft carries a medallion of Ferdinand and Isabella and the group is made complete by two enormous lions at the end of the balustrade running from the center to the sides of the fountain.

A frank and thorough work is Mr. Taft's "History of American Sculpture," published in 1903. It is widely read by both the amateur and professional. His activities have also been directed toward architecture, and in 1907 he was made a corresponding member of the American Institute of Architects. To the city of Chicago Lorado Taft has given freely of his best for the common good, and it is largely as a citizen that he has taken a firm hold upon the friendly appreciation of his own city and gained the respect of his confrères throughout the country.



COFFEE CULTURE IN CUBA AND PORTO RICO¹ " "

IN CUBA there are said to have been in 1847 some 2,000 or more coffee plantations and the crop, notwithstanding the thriftless system of cultivation then existing, amounted, it appears, to about 48,000,000 pounds annually. From that date the production rapidly declined, and in the last two decades of the past century Cuba imported from Porto Rico a large proportion of her consumption of coffee.

During the same period naturally the cultivation of coffee in Porto Rico increased and the ratio of growth since then has been well maintained, but it still remains capable of great expansion on extensive tracts—now almost unproductive on the hills and in the valleys of the lower lands. The coffee of Porto Rico is distinguished by its high quality.

Of the coffee of Cuba, it may be said that it rewards careful culture and preparation by a richness of flavor and capacity for heavy yields unsurpassed in any other West India Island or in South America. These well-established facts should point to the revival and development, under the present favorable auspices of good government and an enlightened agricultural system, of an important and highly lucrative industry.

Previous modes of procedure, it is scarcely needful to point out, were neither rational nor economical. They involved the wastage of large tracts of excellent lands, specially suited for the culture of coffee, and a needless sinking of capital. The life of a coffee plantation managed under this vicious system was limited necessarily to a comparatively short term of years.

Cultivation carried out with thoroughness will, indeed, hasten the natural processes by which the fertilizer elements contained in the soil are rendered soluble and capable of assimilation by the plant, but it cannot replace what has been removed in the shape of crops, leaves, and prunings. On this fact is predicated the necessity for the use of manures; and in manuring amply and judiciously lies the secret of the perennial maintenance of the coffee plantation.

The coffee shrub requires first a deep soil. If the taproot be stopped by rocks, or compact clay, the plant dies. The composition of the best coffee soils varies considerably, but in those of Porto Rico it is found that sand is a principal constituent of the majority of them, while the surface is rich in humus, the product of decayed forest

¹ By Alvin Fox, horticulturist on tropical plants. Reproduced from Simmons' Spice Mill, New York.



A COFFEE TREE.

The coffee tree if left to grow naturally will reach a height of about 18 feet, but in order to facilitate gathering and to increase the yield per acre the tree is not allowed to grow more than 8 feet. The leaves are of a bright green color, turning into the olive shade when full grown.

vegetation. Heavy clays are altogether unsuitable and the proportion of clay must in no case be such as to induce the retention of stagnant moisture, nor are calcareous soils suitable.

A high percentage of iron in the soil and subsoil is not an objection; indeed, ferruginous and silicious soils are sought after since it has been remarked that the ravages of the "*bemilecia vastatrix*" or leaf blight, are less frequent and less severe on them than elsewhere. A poor subsoil may be put up with, provided that it be not formed of a damp clay or a compact tufa.

The climatic conditions favorable to the remunerative culture of the coffee shrub are tolerably well understood. The mean temperature of the highlands of both Cuba and Porto Rico, affording as they do a climate of perpetual spring with a range of scarcely more than 11 degrees between the temperature of the hottest and coldest months—is admirably suited to the requirements of the plant. In Porto Rico the finest coffee has hitherto been produced at altitudes between 600 and 2,500 feet above the sea level. Upon these highlands, a constant breeze cools the atmosphere, and the well-distributed rainfall, averaging from 60 inches annually at San Juan to 100 inches in the northeast of the island and upon the highlands of the interior, tends to equalize the temperature of the seasons. Thus vegetation does not suffer even in periods of comparative drought, whilst during this rainy season the precipitation is seldom torrential. On the southern slope of the island, however, both rainfall and the atmospheric moisture are considerably less, so that in some districts irrigation is advantageous, if not absolutely necessary. As regards Cuba, while coffee will grow almost anywhere in the island, it thrives best at altitudes of between 1,500 to 2,500 feet.

The question of shelter and shading is one of some little difficulty. It was formerly the general practice in Porto Rico, and in parts of Cuba, to provide shade trees, in the belief that the coffee shrub would not develop properly or thrive continuously without them. But later experience has shown that in the less torrid districts shade is unnecessary, if not prejudicial. This is explained by the fact that the only benefit afforded by the presence of shade trees is that of lessening the force of the sun's rays; while, on the other hand, the consumption of the fertilizer matters of the soil and manures by the shade trees is of course to the detriment of the coffee plant. In Java shading is universal and is general also in Venezuela. In Brazil, however, the absence of shade trees is believed to insure larger yields, although it is said by some to lessen the duration of the producing power of the plantation. On the whole, it may be assumed that shading is a matter in which local practice will be, in most cases, a safe guide especially if viewed in conjunction with other and economical considerations. In particular there is the fact that



COFFEE CULTURE.

The management of a coffee plantation requires a great deal of care and many laborers. The ground must be fertilized carefully and the crop watched continuously. Upper picture: Gathering coffee. Lower picture: A branch of a coffee tree that has been properly pruned and topped.

both in Cuba and in Porto Rico, numerous marketable fruits are borne on trees suitable for shade and shelter purposes. Thus, a plantation may be utilized for both fruit and coffee culture without detriment to either and with corresponding profit to the planter, if only regard be had to proper cultivation and to the adequate supply of available plant foods. Where it may be deemed advisable to plant shade trees, simply as such, the *Albizzia Sebeck*—the French *bois noir*—which has always been employed by coffee planters in the Antilles, would appear to unite the greatest number of desirable qualities and locally at least, to give the best results. *Brysonima spicata*, too, is much employed as a shade tree in the British West Indies. It possesses the advantages of sparse foliage, rapid growth, of affording shelter against the wind as well as the sun, of great hardiness, and of not attaining too great a size.

The method of propagation which has in the past been largely adopted in Porto Rico by utilizing off-shoots and self-sown plants, is to be deprecated, and the system of sowing carefully selected seed in specially prepared seed beds is that which should be followed. The site chosen for the seed beds should be on a slight incline, so as to afford natural drainage: it should occupy a sheltered position and possess a good surface layer of vegetable soil, which must be worked until a fine tilth is secured. It will have been cleared of all roots, stones, etc., and in most cases, it should be enriched with a good dressing of well-rotted barnyard manure.

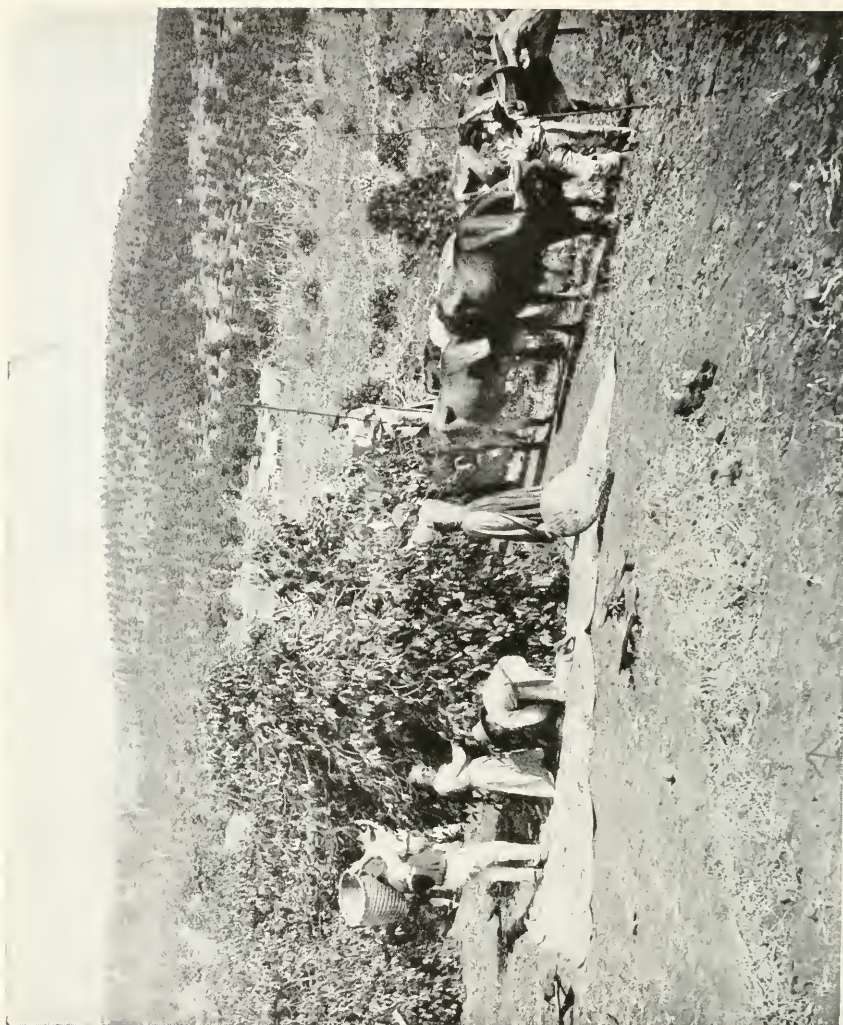
The sowing is best made in the month of February and the coffee grains to be sown should be selected for their size, weight, and perfect formation. The grains are planted at a depth of about an inch and a half, the finger or a small stick being used for the purpose, and after they are placed in the hole the earth is pressed down over them with the hand. The sowing should be made in rows distant about six inches from each other, the space between each grain sown being the same. In about 20 days the young coffee plants will begin to appear, and they will remain in the seed bed for a year and a half, when they will have attained a height of about 30 inches and be ready for transplanting to the site selected for the coffee grove. The seed beds must be carefully kept free from weeds and be irrigated frequently with small quantities of water so as to maintain a constant, but not excessive degree of moisture; provision must be made also for sheltering the young plants from excessive solar heat and from strong winds. Before transplanting, the lower branches of the young shrub are cut away so as to obtain a clean and straight stem with a crown at a convenient height for the gathering of the crops. The best season for transplanting is at the autumn equinox. To obtain maximum yields the following directions are laid down.

Select a fertile soil rich in humus and lying so that natural drainage and good aspect are secured.



HARVESTING COFFEE.

An average yield for a good coffee shrub is about one and one-half pounds, although in Brazil from two to three pounds are not uncommon. As seen in this picture the coffee berries can be easily picked from the bushes without the use of ladders.



Pick out vigorous and well-grown young plants. They must be removed without breakage of the roots and with a good ball of earth about them. If the taproot project beyond the ball of earth it should be cut with a sharp knife, reducing it to a length of about 8 inches.

Plant in rows about 8 feet apart and at a distance of 8 feet in the rows. This will give 700 plants to the acre. This is a general rule, but in the case of exposed situations closer planting is advisable. In such conditions small, compact trees, topped at about 2 feet 6 inches, will give the best results.

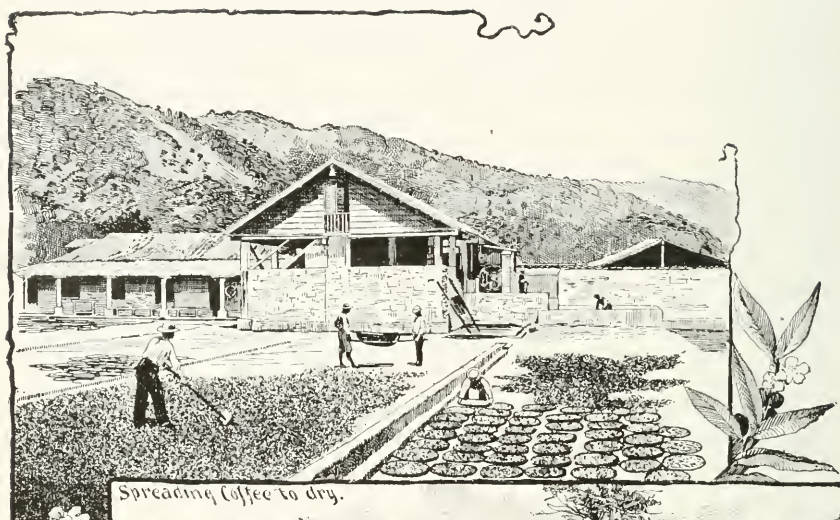
Plant in rainy weather and with soil in tolerably moist condition.

Previous to planting prepare holes 18 inches square and 18 inches in depth. In preparing the holes, the surface soil should be placed to the right and the soil from the bottom of the hole to the left. The latter should be mixed with about two pounds of well-rotted dung. About eight days should intervene between the opening of the holes and the planting. The surface soil, which from having been exposed to the atmosphere is most suitable for contact with the roots, is first to be used and the holes are then to be filled up with the remaining manured soil. The plants must be carefully placed and the holes filled so as to leave no lodgment for water.

Three or four months after the planting the ground should be gone over and any dead or unsatisfactory plants replaced with others of the like size, so that the entire grove may develop evenly. All suckers and undesirable shoots must be removed as soon as they appear.

To obtain maximum crops while avoiding inequalities and intermittency of yield so far as seasons and weather will permit, must be a chief aim of the planter, and questions of soil, planting, pruning and cultivation having been carefully studied; the application of suitable fertilizers in adequate quantity and in proper season becomes the paramount consideration.

In the Antilles rational manuring on coffee plantations did not exist. At most the pulp and parchment were returned to the soil and any barnyard manure that might be available was applied haphazard. In fact, the capital stock of the land was the bank drawn upon for the production of crops. Under a better system of agriculture the application of dung or barnyard manure is the time-honored method of restoring to the soil the elements of plant food of which successive crops have depleted it, but an adequate supply of barnyard manure is not always available and the carriage of so bulky a material is costly. Moreover, although farmyard dung is, in a general sense, rightly termed a complete manure, and is especially valuable for its mechanical action on soils, the proportion in which the principal constituents of plant foods occur in it do not correspond to the requirements of the coffee shrub. Barnyard manure thus needs to be supplemented if heavy cropping and healthy growth are to be secured.



Spreading coffee to dry.



Picking Coffee.

COFFEE CULTURE.

The planter can not be too strongly recommended to have the composition of the soil of the plantation ascertained by careful analysis. It has to be borne in mind that to manure successfully it is necessary to be acquainted not only with the food requirements of the plant and crop, but also with the constituents available in the soil for supplying the food. From a comparison of the demands made by the crop and the materials at hand for meeting them, we discover what deficiencies exist and are able to determine the most suitable and economical material for supplying them. From a well-managed plantation in full yield an average crop of one and a half pounds of dressed coffee per tree should be readily obtainable; and this is the minimum result of careful cultivation and liberal manuring that should be aimed at. Thus, an acre of plantation, representing 700 trees, thoroughly cultivated and in full bearing, may at a moderate estimate be expected to yield 1,050 pounds of dressed coffee annually.

Much larger and considerably smaller average yields are obtained in other coffee-growing countries. In Ceylon, before disease ravaged the plantations, a yield of 20 hundred per acre was not infrequently obtained and this is said to be also the case in Guatemala. In Mexico, crops of $2\frac{1}{2}$ pounds and in Brazil 3 pounds per shrub are said to be common; while, on the other hand, in some places the average yield is reckoned scarcely to exceed one-half pound per tree. In adopting the figure of $1\frac{1}{2}$ pounds of dressed coffee as the lowest yield per tree that the planter should look to attain, I have in view the fact that it is always better to manure for a maximum crop when calculating the fertilizer elements to be supplied to the soil.

Constant attention must be given to the medicinal cultivation of the soil and it should never be allowed to become hard. Ordinarily, two plowings are given, the first shortly after the crop has been gathered and the second five or six months later, advantage being taken of a period when the soil is in good working order.

To go on the land when it is wet is certain to do harm. Perfect drainage, either natural or artificial, is of the greatest importance. Where the site of the plantation does not allow of the use of the plow, cultivation by the spade or the fork has to be substituted, the soil being stirred to the depth of about a foot, in order to favor the retention of moisture and to obtain the greatest possible advantage from the rainfall.

Great care must at all times be taken to avoid injury to the main lateral roots of the plant in the process of cultivation. It is especially important not to plow, or even to hoe deeply, at the time of flowering, in order not to destroy the delicate hairs which the rootlets of the shrub put forth at that period. These root hairs are believed to have for their purpose the supply of additional nourishment to the plant to assist in the formation of the fruit. Hoeing should be

especially attended to immediately before the period of flowering in order to destroy weeds and stray plants, which would otherwise appropriate the manure applied for the nourishment of the crop and would also tend to choke the plants and monopolize air and light.

When irrigation is had recourse to it should not be too frequent or in too great a quantity, since the effect of an opposite course is said to be to diminish the aroma and thus to depreciate the quality of the crop. At the period of flowering irrigation must be suspended, even rain being prejudicial to the formation of the berry.

At all stages of their growth the trees must be systematically and carefully pruned, with the object of keeping them open, so as to insure the penetration of light and the free circulation of air, and so also to preserve only such portions of the wood as will bear fruit abundantly and of good quality. As in the case of plants in the seed-beds, so in the plantation all suckers and undesirable shoots must be removed immediately they appear.

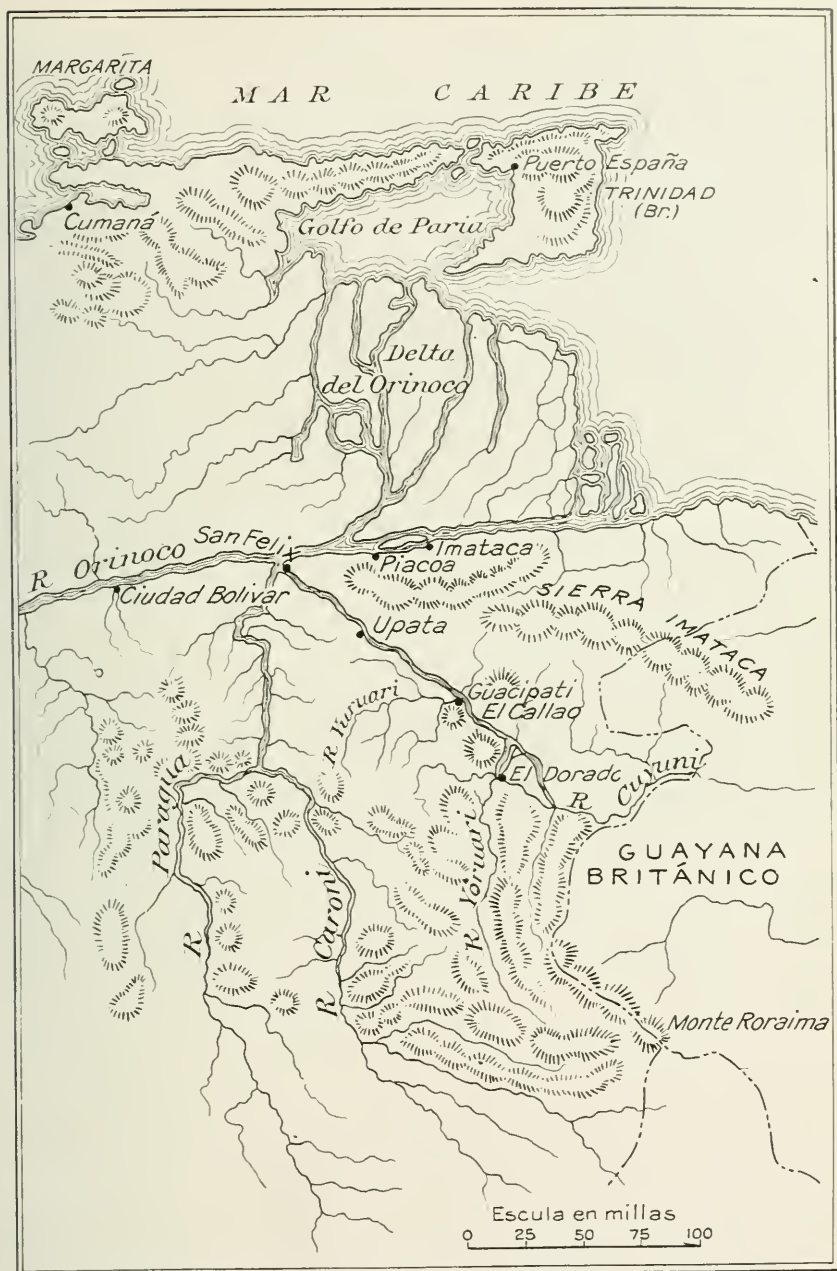
THE GOLD DISTRICT OF VENEZUELA¹

THE principal gold-bearing area of Venezuela occupies the southwestern portion of the Republic, extending from the headquarters of the River Yuruari down to the frontier of British Guiana. The River Caroní, one of the chief tributaries of the Orinoco system, bounds the district on the west, but this region has as yet been but little explored.

The portion of Venezuela embraced within these limits, and now known as Spanish Guiana, was once thought by the English to be the real El Dorado of the Spanish padres. Sir Walter Raleigh, in one of his western voyages in search of the elusive El Dorado, headed an expedition to the Orinoco in 1595 and explored the river in small boats as far as Ciudad Bolívar, or Angostura. He collected samples of gold and diamonds, brought to him by the Indians, but failed to find the source of either.

This part of Venezuela is of large extent, almost one-third the entire area of the country, without including the vast stretches of unexplored territory to the south and west, and from it Venezuela derives a considerable proportion of her revenue, in the shape of taxes on gold, rubber, chiclé, and dyewoods, as well as from cattle and other minor industries. The country also contains vast stores of valuable hardwoods, but this source of wealth has small value at present, owing to the high cost of transportation.

¹ By H. Huntington Miller, in the "Mining and Scientific Press," San Francisco, Cal.



MAP OF VENEZUELAN GOLD-FIELD DISTRICT.

The gold deposits of Venezuela lie within the southeast section of the country between the source of the Yuruari River and the frontier of British Guiana, with the Caroni River as a boundary on the west. Throughout this extensive territory gold quartz occurs frequently, one bed, owned by the old El Callao Co., having produced in the 30 years of its exploitation more than \$50,000,000. In the same territory are found innumerable outcroppings of alluvial gold and very rich deposits of gold nuggets.

The interior is best reached by means of the Orinoco River, which is navigable during most of the year for ocean-going steamers as far as Ciudad Bolívar. The nearest part of the gold district lies 150 miles southeast from the little port of San Feliz on the Orinoco, whence a wagonroad of fair quality connects with the mining town of El Callao and extends to the lower part of the district, 50 to 100 miles southeast. Some traffic is also maintained with the lower country by means of large flatboats and launches which come up from British Guiana.

The distribution of gold is general throughout this extensive area and its occurrence can be divided into three types—true alluvials, belts or zones of shale, and quartz veins.

The alluvial deposits are mainly confined to the extreme southeastern portion, close to the border of British Guiana, the same formation extending across the frontier into that country.

Some placer gold is also found along the Caroní and especially one of its branches, the Paraguá; and the smaller tributary streams of the Orinoco just above Angostura are reported to afford gold, although these parts are as yet little explored.

The extensive belts and zones of auriferous shale and schist are probably the original source of the alluvial gold, which is derived from an intricate system of quartz veinlets, frequently uniting to form pockets of considerable richness. A study of the rock formation indicates that the gold was contained within stringers and crystalline grains of arsenical pyrite. The oxidation and decomposition of this mineral and of the friable schist that encloses it, has resulted in the formation of the dry pockets for which some portions of the district are famous. The gradual weathering of the schist and the washing out and concentration of the gold in the beds and banks of the streams have originated the placers of the lower country.

The gold-bearing quartz veins so far discovered are mainly confined to the more northerly portions of the district around the old town and mine of El Callao, which, during the period of its maximum production, ranked among the notable mining ventures of the world and is reputed to have produced \$50,000,000 in the thirty-odd years of its life.

The veins occur near, or inclosed within, a series of eruptive dikes, mainly of diabase, which have fractured the schist. During the period of its maximum activity, 30 years ago, the El Callao district had a number of operating mines and several mills were running, with a total capacity of 1,000 tons per day. The richer deposits, however, were soon worked out, and with increasing depth the veins became poor and refractory. Steam being the motive power and the neighboring forests being rapidly devastated,

scarcity of fuel, and increased cost of pumping, together with the impoverishment of the veins, caused the stoppage of one mine after another until only three companies are now in active operation, while a fourth, the successor of the original El Callao, has suspended operations pending the conclusion of the war.

The three companies still operating are the following:

Gold Fields of Venezuela (Ltd.).—This is an English corporation, with headquarters at El Peru, owning a large group of mining claims about 4 miles west of El Callao. The ore, after being crushed, is ground in two Chilean mills with addition of quicksilver. The discharged pulp is passed over amalgamation plates and the tailing from the plates is treated in steel tanks by cyanidation. The ore yields from 1 to 4 ounces gold per ton.

El Amparo Mine (Ltd.).—This is also an English corporation owning the majority of stock in another company of similar name incorporated in Venezuela to work the once famous La Paz bonanza, one of the surface pockets, from which 10,000 ounces of gold were taken by crude methods, from a series of rich veinlets and pockets, almost at the surface. After the richest part of the bonanza had been worked out, a narrow but rich pay streak was exploited by the present company to a depth of over 300 feet, where it finally became too narrow and irregular for profitable working. Ore is crushed in a 10-stamp mill through 10-mesh screens. The resulting coarse pulp is then reground and the gold amalgamated in revolving Cobb pans. The tailing from the pans passes over James tables to remove the auriferous sulphides, and is then cyanided in steel tanks. The company is now in search of another property, so the mine is probably worked out.

Compañía Anonima lo Increible.—This is a Venezuelan corporation, with headquarters at Caracas. The mines, 8 miles northeast from El Callao, are the result of a comparatively recent discovery. The hard quartz ore is crushed in a 20-stamp mill through 20-mesh diagonal-slot screens, the free gold being extracted by amalgamation. The average extraction from over 40,000 tons crushed to date is slightly in excess of $\frac{1}{2}$ ounce per ton, about $\frac{1}{4}$ ounce remaining in the tailing. About 25,000 tons of tailing is now ready for cyanidation and the company is preparing to erect a plant to treat this residue as well as to handle the new tailing. Several veins are in process of exploitation and the future of the property is good.

New Callao Mining Co.—This is the successor of the original El Callao, which was an English corporation. The present company, being a French organization, has been in trouble since the beginning of the war, as the necessary capital has been impossible to obtain. The main El Callao mine was abandoned and allowed to fill with water many years ago, but the property of this company is an extensive one, and embraces a number of other mines, some of them with excellent prospects.

The Cicapra district, which is situated about 25 miles northwest from El Callao, made a sensation some 10 or 15 years ago on account of the discovery of a succession of rich surface pockets of coarse gold, found almost under the grass roots in the low hills bordering the banks of the Cicapra River, a branch of the upper Yuruari. The gold is in decomposed schist. A portion of this zone, including the bed and banks of the Cicapra River, is being explored by the Yuruari Co., a Venezuelan corporation, with headquarters at Caracas. The operations, which as yet are of a preliminary character, are being carried on by means of a small clamshell dredge, with a capacity of 200 cubic yards per day. The entire property of several hundred acres has been fairly well prospected by churn-drilling, and several million cubic yards of material is estimated to be available, with an average yield of \$1 per yard, at a cost of 50 cents per yard.

The Cuyuni and El Dorado districts of Spanish Guiana embrace the extreme southeastern part of Venezuela, extending to the frontier of British Guiana. The production is mainly from alluvial washings, although some gold is now being won from quartz veins.

The workings extend into the basin of the Cuyuni, which in turn runs into the main Esequibo River, the principal stream of British Guiana. Two French companies are operating in the district; they are known locally as the Cuyuni Co. and the Perserverancia or El Dorado Co. In addition to these two ventures, a considerable quantity of gold, amounting in favorable seasons to several thousand ounces, is produced by primitive hand washing in bateas and hand rockers, from concessions belonging to private individuals, who grant permits to the miners, and exact a percentage of the gold produced as royalty. Altogether, this is a rich and promising district and may become of much greater importance when more favorable conditions prevail. At present the output is limited owing to lack of transportation, high cost of food and supplies, and the prevalence of malarial fevers.

With better facilities in the shape of dredges and other modern gold-saving machinery, as well as the construction of better roads from the Orinoco River, southeastern Venezuela may easily take its place in the front rank as one of the most productive gold-mining districts of South America. This applies in equal proportion to the northern part, around El Callao. The entire district, with the exception of the immediate vicinity of El Callao, is fairly well timbered. The rivers and larger streams abound in water-power sites, and the country presents no unusual difficulties to the construction of good roads. The climate, while hot and damp in the rainy season, is not unhealthy for white men who observe the usual precautions necessary in all tropical countries.

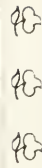
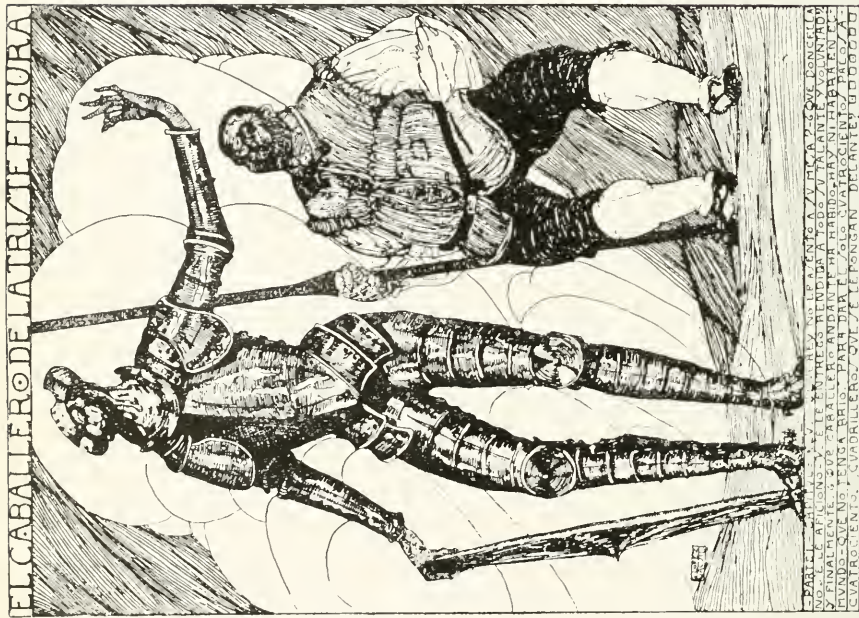
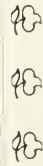
IN PAINTERS and delineators, authors and poets ever have found a fit complement to their creations. They are to the writer as the actor to the playwright or dramatist. They interpret, in fine, incorporate, the personalities created by the imagination or adapted from real experience. Hence you may have seen two artists, the writer and the painter, frequently consulting together, and the results of their conferences go hand in hand.

In the early days of primitive printing—the Stone Age of the book—the clever, roguish and even satirical vignettes were conceived, to which one must resort to study the origin of caricature. Later, as Gutenberg's invention was perfected until it reached the astonishing printing presses of our day, the art of the illustrator demands recognition and reaffirms its supremacy. A legion of celebrated artists review in their silent studios the pages of the world's celebrated books and study their characters as they attempt to animate them for others with pen and brush. It would be impossible to condense into a brief roll the list of the many artists who have attained success to-day in Europe in this field. Daily there appears a new signature that rivals those whose fame already is assured by criticism and public admiration.

The rising as well as the well-established artists share their efforts amongst the classic and recent books.

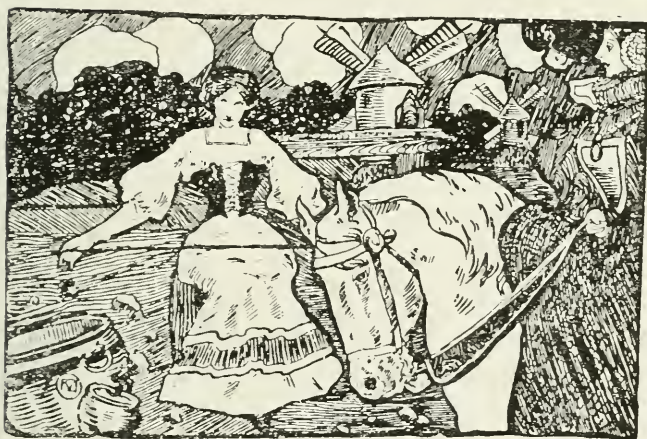
Shakespeare and Cervantes, like Victor Hugo and Balzac, have been favorite authors with these modern analyzers, the portrayers of the drama of life. Certain artists in France and England, Germany and Italy, as well as Spain, have produced admirably original concepts and shown remarkable deftness in their execution, and now to their number may be added two collaborators from America. The New World is proud to send her devotees of art and beauty to the fastidious court of Europe, in which, laying aside differences in nationality, the most noteworthy interpreters, from an aesthetic point of view, of the world's library combat for supremacy. America wishes to demonstrate what she has begun to be.

¹ Translation of an article by Bernardo G. Barros, published in the September (1918) number of *Social*, Habana, Cuba.



TWO AMERICAN ILLUSTRATORS OF DON QUIXOTE.

The center picture, called the Sad-Faced Knight, is drawn by the Mexican, Montenegro. At the right appears its designer, as pictured by López-Naguil, and at the left López-Naguil is portrayed by Roberto Montenegro.



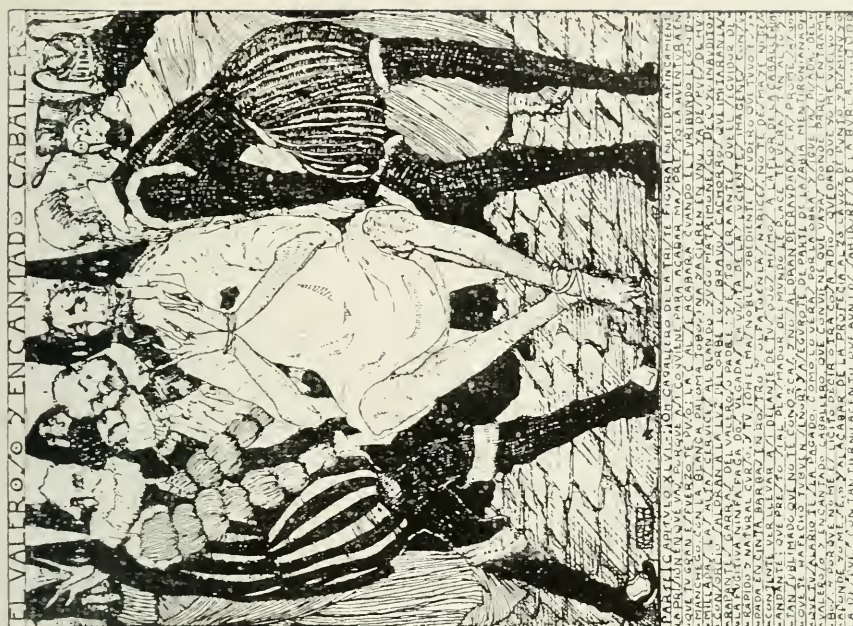
MONTENEGRO'S ILLUSTRATIONS OF DON QUIXOTE.

Of the Mexican artist, Montenegro, designer of the three illustrations above, the authoritative Italian critic, Vittorio Pica, has said: "He possesses the art of interpreting the heroic and mystical spirit of the remarkable book that constitutes the greatest glory of Spanish literature." The Mexican has achieved many triumphs as a painter in Europe as well as America.

Overlooking the painters, still few in number; leaving aside the caricaturists, who in Buenos Aires and Habana constitute the two most vigorous schools of satire and a facility for the picaresque, two young artists, Roberto Montenegro and López-Naguil (the former Mexican and the latter Argentinian), merit warm commendation for the work they have undertaken. Both young and enamored of their art, they win the admiration of the most exacting critic. The highest tribute has been dedicated to them by a connoisseur whose competence in the fine arts is undisputed throughout Europe—Vittorio Pica. In a future article we shall consider the work of each separately. At present we link their names only for the purpose of comment upon their illustrations of *Don Quixote*.

In these two enthusiastic Americans, in whom are to be found the technique and the ideology of more than one European artist, we have admirable illustrations of the immortal book which seems to-day to be a historic compendium, exuberant in fancy, of a race of conquerors, adventurers, and farceurs, as well as of an age splendid in literature and art.

How have Montenegro and López-Naguil conceived of the famous Cervantine personages? How have they visualized the scenes which the book presents in rapid succession, in which fantasy and reality unite to give an atmosphere of satire and wit to the whole? Indeed, as may immediately be appreciated from the accompanying illustrations, the two artists do not possess the same or even a similar point of view. The *Quixote* of López-Naguil is more delicate, more spiritual, if the expression may be allowed, than that of Montenegro, who, adopting a style imitative of the wood engravings in which the Germans, Lucas Cranach and Adam Adolf Oberlander, excelled, imparts a certain rudeness to the type—a rusticity that is hardly to be found in López-Naguil, although disguised by a wealth of decorative lines. From one point of view Montenegro is more real, more human. López-Naguil seeks the same expression of human emotion, but upon condensing it into that form of contrasting black and white, light and shadow, besides a signal appreciation of the decorative art, his characters gain that spirit which is lacking in Montenegro's work. This difference has its rise naturally in the manner in which each artist has comprehended *Quixote*. López-Naguil has seen in the sad-faced knight one longing for the infinite, whose creator places him in ridiculous situations for didactic purposes. In reality, the book is nothing other than the drama of human life and soul, ever dreaming and aspirant, daily facing disappointing realism. The chimeras of Alonso Quijano are our own. We also have had or shall experience the windmill episode, and in rapt romantic or in democratic madness we shall redress injuries and strive

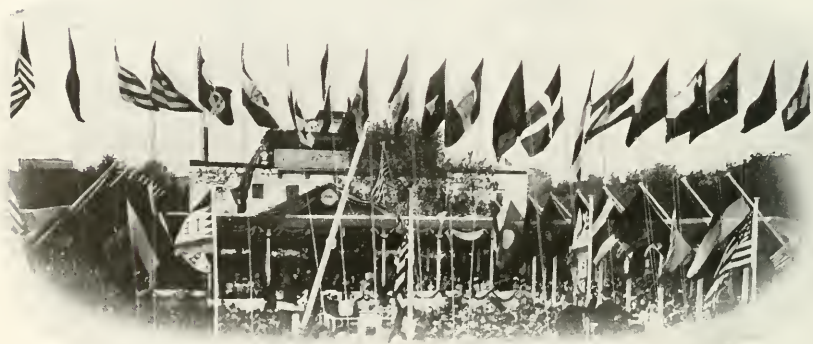


LÓPEZ-NAGUIL'S ILLUSTRATIONS OF DON QUIXOTE.

Two Americans, the one Argentinian and the other Mexican, have joined the group of European artists who concentrate their efforts on illustrating the masterpiece of Cervantes. The two drawings above are the work of the Argentinian, López-Naguil. Attempting in treatment to imitate the old wood engravings in which the Germans Lucas Crauch and Adam Adolph Oberhauser, excelled, he imparts a certain rudeness to the characters which is not entirely masked by a profusion of decorative lines.

to liberate more than one brother who appears to us tortured by acute suffering. We shall fail like Alonso Quijano; we shall rise again to continue the course; and although Reason—our Sancho—obstinately persists in showing us the proper verities, always will we go forward, lance in hand, upon life's highways. Something of all this López-Naguil's drawings will suggest to us. Vittorio Pica has said rightly, "He has struck the keynote in interpreting the heroic and mystic spirit of the book that represents the greatest glory of Spanish literature."

In the delicate traceries of his pencil you may catch the true artist's idealism; and although you note occasional defects in technique and perspective, you will be very lenient toward the artist. He is very young; he is scarcely 27 years old; and already he has produced more than an earnest of the accomplishments he has undertaken. Montenegro, older and widely known in artistic circles, has not expressed the spirit of Quixote so well. The Mexican has achieved greater success in another branch of artistic endeavor, which we shall review later. Although his illustrations of Don Quixote are very creditable, those of his Argentinian collaborator are preferable. The latter, together with those of the Spaniard Ricardo Marín, are the most satisfactory contemporary interpretations of that ardent soul who, intoxicated with fantasy and dreaming, set out one memorable morning to conquer a world to lay at the feet of the imaginary Dulcinea.



PALISADES INTERSTATE PARK

MOST national and State parks are created to preserve the glories of their natural beauty from the ravages of advancing civilization. The Palisades Interstate Park not only fulfills this requirement, but also embraces a territory in the States of New York and New Jersey which in historical interest is hardly surpassed by an area of equal size in the United States. Not only does this park preserve the stately and magnificent palisades which Capt. Henry Hudson and his crew set their wondering eyes on when they first sailed up the river that was to make his name immortal, but within its confines are old forts, battle grounds, and historic scenes which are rich in legendry and Revolutionary history. There is probably not a park in the country, also, from which the people derive as much benefit, inasmuch as the Palisades Park is within two hours' travel of at least 10,000,000 people.

The Palisades Interstate Park had its inception in a movement, started in the early nineties, to save the palisades, one of the famous scenic attractions of the country, from destruction by quarrymen. The New Jersey Federation of Women's Clubs were instrumental in persuading the legislature of that State to stop the destruction of the palisades, and a small sum of money, sufficient to obtain options on the land, was appropriated by both New York and New Jersey and a commission appointed, representing both States, to administer the fund. Twelve miles of this park were in New Jersey and about 2 miles in New York. The area has been added to from time to time by both purchase and donation until now the park comprises about 30,000 acres of land. The gift of Mrs. Edward H. Harriman of \$1,000,000 and 10,000 acres of land added materially to the success of the park project. The part of the park known as the Harriman-Bear Mountain section contains about 26,000 acres on the west side of the Hudson River. The first 10 or 12 years were spent almost entirely in the acquisition of lands, and it is only since 1912 that much attention has been given to improvements. About \$8,000,000 has been expended, of which more than half was of private subscription, and the money has been used for the building of roads, basins, shelters, docks, and lakes until to-day the Palisades Interstate Park is probably the best outfitted piece of land for public use that there is in the country.

The improvement of this park has been accomplished by the commissioners in a novel way, as indeed is the entire scheme of the



BOAT LANDING AT BEAR MOUNTAIN PARK.

These large river boats bring thousands to enjoy the Palisades Park every season. The ride up the river from New York City to the Palisades Park is a wonderful time on a hot day in summer.



FOREST VIEW BASIN.

Three large motor-boat basins were constructed by the commissioners that would accommodate 1,000 pleasure boats. This view shows the Forest View playground and motor-boat basin directly under the overhanging palisades in New Jersey.



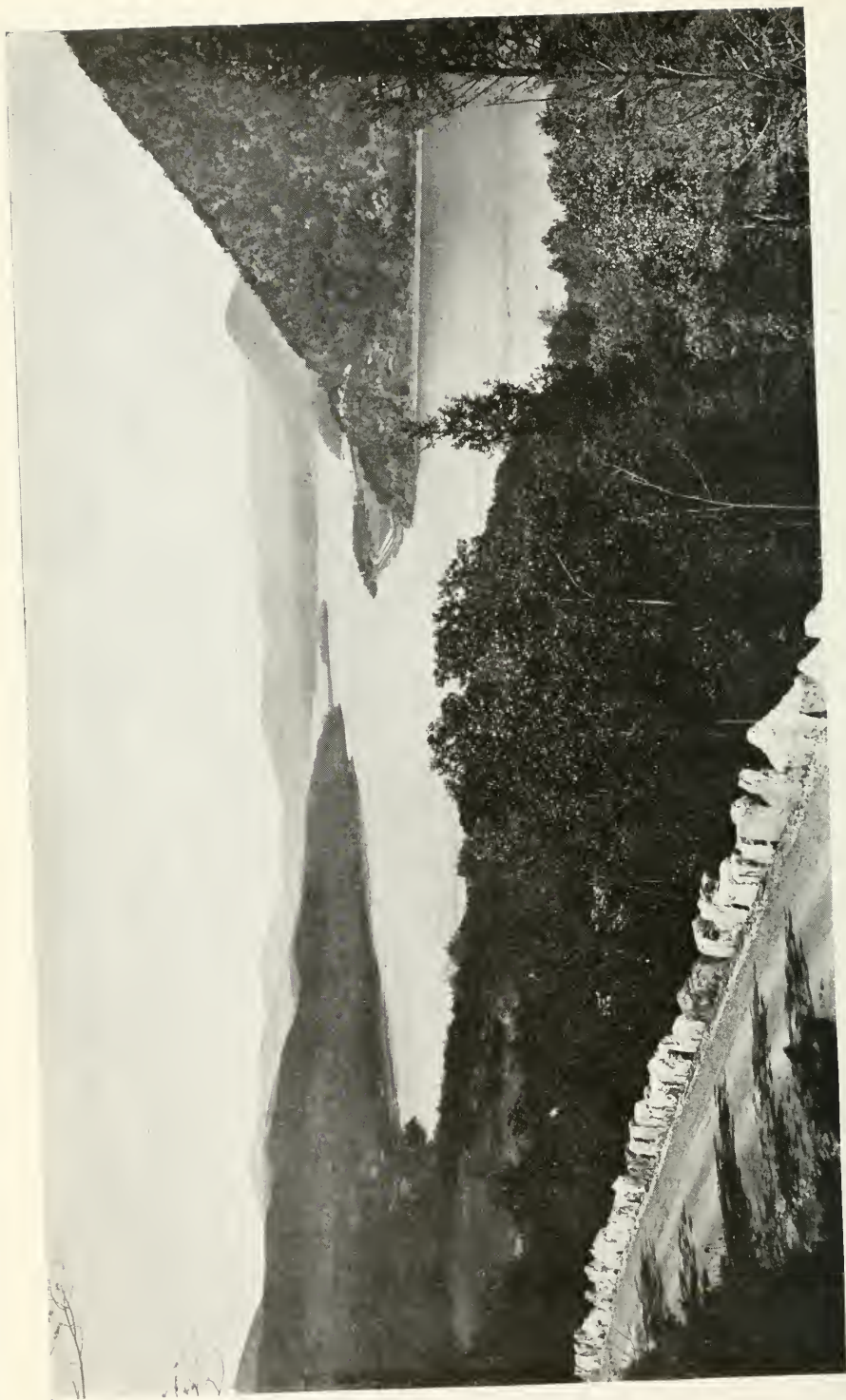
THE ENGLEWOOD APPROACH.

A driveway up the sheer face of the Palisades cliffs near Englewood, N. Y., connecting that city with the city of New York.

park novel. They have organized their own engineering and construction force, purchased their own plant, and have done all their work in this way. Their policy has been to destroy nothing and to preserve all natural beauties. Members of the force have been picked from those who were former residents of the park lands, thereby giving a personal touch to the work that would not otherwise be obtained. Most of the building materials have been taken from the property, the commission having its own sawmills and rock crushers.

The palisades section, which extends over 12 miles along the west bank of the Hudson, directly opposite the upper part of New York City, was a wilderness shut off from New Jersey by the cliffs themselves and nearly inaccessible from the river by the rough boulder-strewn shores. The section between the shore and cliffs, from 300 to 1,000 feet wide, has been cleaned up generally, 13 docks constructed, and motor boat basins built which accommodate more than 1,000 craft. Many springs along the water's edge have been cleaned out and protected, camping sites in abundance have been established, pavilions, refreshment stands, and comfort stations are maintained, and, in short, everything done for the convenience and pleasure of the visitors. Stairways have been constructed on the face of the cliffs to enable the people to get into the park from the land side, and a ferry boat service has been established between the park and New York City.

These and numerous other conveniences and improvements in the Palisades Park, which have cost the States of New York and New Jersey millions of dollars, have not been in vain. If the test of any public improvement lies in the extent to which its usefulness is availed of by the people, then the Palisades Park has been a success from the beginning. Hundreds of working boys from the near-by cities go to the park on Saturday afternoon and remain until early Monday morning in the camps established by the neighborhood associations of New York. They have opportunities for baseball, tennis, swimming, and boating, and two nights away from the hot tenements of the city. Thousands of people avail themselves of the general camping sites during their summer vacation. To a point 40 miles from New York, to which steamboat companies run excursions by arrangement with the park commissioners for the small sum of 50 cents per round trip, more than 650,000 people come each season. There is a large dance hall in the park which will accommodate 500 couples and the floor and music are free. There are many tables and benches in the groves for picnic parties and swings for children. On Hessian Pond is a boathouse with 150 rowboats that are free. One hundred and thirty-five additional rowboats are now under construction to supply the demand for this sort of recreation.



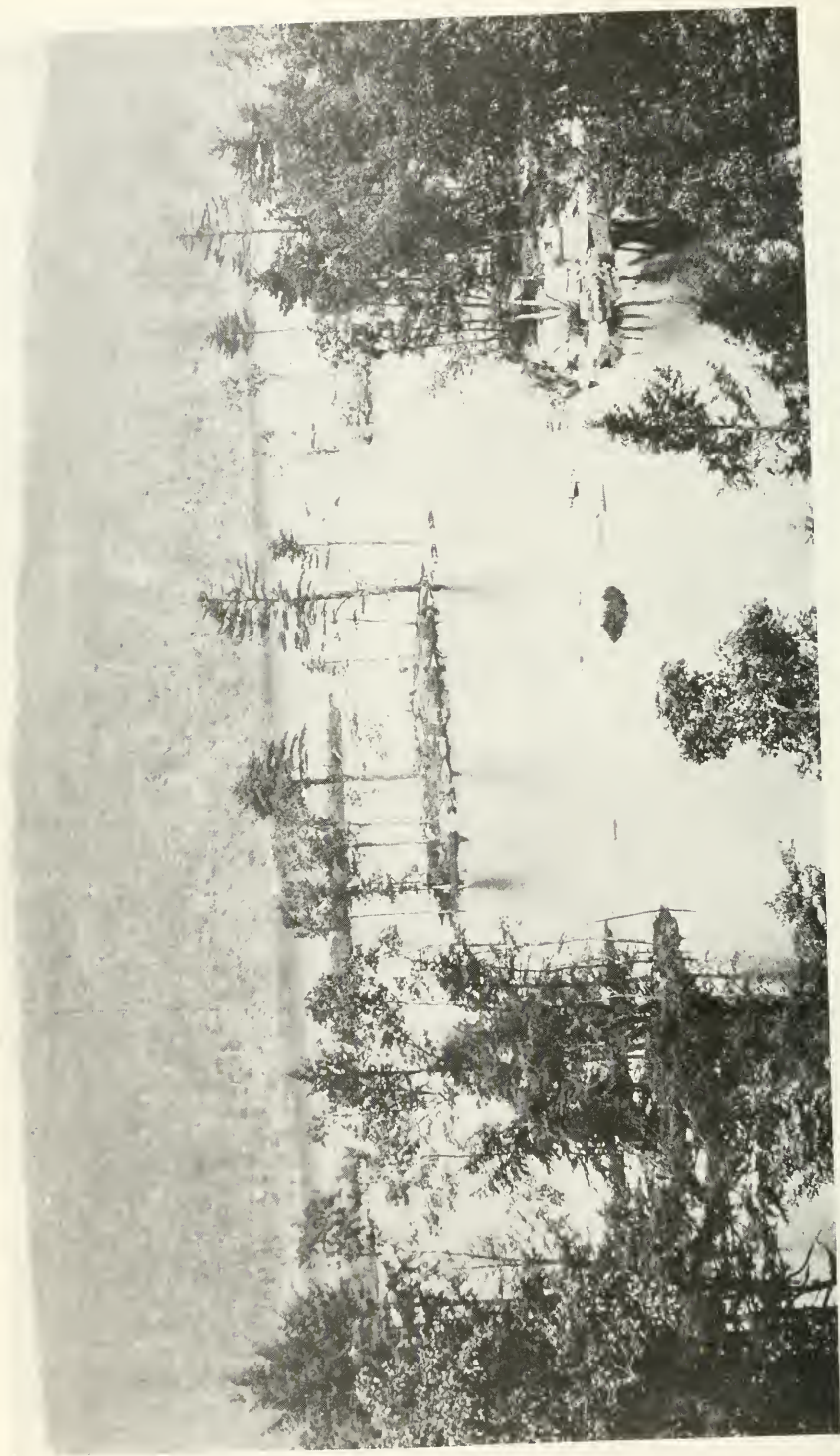
THE HUDSON RIVER.

It is small wonder that the Hudson River thrilled Henry Hudson and his crew when they discovered the great waterway of eastern New York, for even to-day the views on this river are indescribable in their beauty. This is a view looking north on the Hudson from Bear Mountain Park.



THE PALISADES.

Famous among the scenic attractions of the United States are the steep cliffs on the Hudson River called the Palisades. This picture shows an unusual rock formation of the Palisades in New Jersey.



CAR POND.

An artificial lake in the Harriman section of the Interstate Park, given over to encampments of welfare organizations.

In this section of the park a huge log cabin, the Bear Mountain Inn, has been built at a cost of \$240,000. This wilderness restaurant can furnish meals to 3,000 people at one time, and everything is to be had there from quick lunch to excellent a la carte service. The food is all of the same quality and the prices are arranged so that no profit is made but only expenses are cleared. This restaurant is conducted by the commission and managed by its employees. The dining rooms are all open; no doors and windows. The inn has its own refrigerator and ice-cream plant, power house, and storerooms, and a bottling plant where soft drinks are manufactured from the excellent water in Bear Mountain Spring. Last season over 40,000 automobiles were counted packed in the parking spaces near the inn, and a business averaging more than \$100,000 is done here every year.

In another section of the park the Young Women's Christian Association has established camps where working girls of every race and creed are welcome. About 2,500 enjoy an outing here annually, and at the nominal charge of only \$3.75 per week. Hundreds of poor boys whose lives are spent in the congested districts of New York City are brought to the park each year by charitable organizations and are given a chance to live in the great out-of-doors; taught to swim, exercised, and drilled by competent instructors, and given medical care and motherly attention.

Mingled in with all these recent changes in this territory to which the commissioners have given an up-to-date appearance are a few spots that are more attractive if they retain their aspect of years gone by. The lover of things historic will find here plenty to occupy his attention. Such are the two forts, Clinton and Montgomery, that figured prominently in the American Revolutionary War. The forts, which are now the property of the commission, have not been disturbed since the Revolution. Great hemlock and pine trees are growing on the old ramparts and through the ruins of the old buildings. Recently, however, these forts have been restored, the foundations of the old buildings and magazines are clearly marked, and all the earthworks and ramparts are clearly defined.

Fort Clinton is located at the north end of Hessian pond on a rocky point overlooking and commanding the river. Just north of Fort Clinton is a narrow gorge, Popolopen Creek, with very precipitous sides. On the north of this gorge is Fort Montgomery, a point very like Fort Clinton, and commanding the Hudson for several miles both up and down the stream. Fort Montgomery was the first capital of New York, as Gov. Clinton was in command there when notified of his election in July, 1776, and the first State papers were issued from that point.

These old forts were constructed by the continental and colonial authorities in 1775 and 1776, and from the foot of the cliffs of Fort



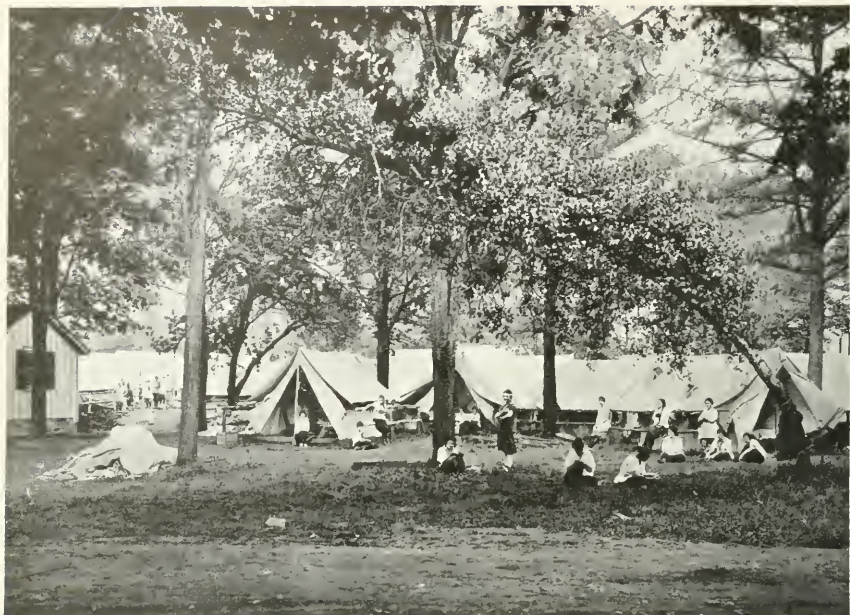
BEAR MOUNTAIN INN AND PLAYGROUND.

To make such improvements as are shown here required time, money, and the generous cooperation of everyone interested in the Palisades Park project. This is Bear Mountain playground at Bear Mountain Park with the Inn and Highland Lake in the background.



POPOLOPEN BRIDGE, BEAR MOUNTAIN, N. Y.

This bridge connects the sites of the Revolutionary forts, Clinton and Montgomery. It was constructed by the Palisades Park commission in conjunction with the State highway department and forms a connecting link in the Henry Hudson Drive.



THE BENEFITS OF THE PALISADES PARK.

The social service work of the management of the Palisades Interstate Park has extended to many fields.
 Top picture: A Young Women's Christian Association camp at Summit Lake. Bottom picture:
 Study hour at a camp for boys.

Montgomery a chain and boom were stretched across the river to a point called Anthony's Nose on the opposite bank. On October 5 the British landed 3,000 men at Ver Planks, on the east side of the Hudson, 8 miles below the chain. Gen. Putnam, in command of the American forces, took all his men, except 300 who were left at Clinton and Montgomery, down the river to Fort Independence. On October 6, under cover of a heavy fog, the British crossed the river to Stony Point, and marching over mountain trails attacked both forts from the rear, while three British frigates passed Fort Independence and attacked the forts from the river. Gen. James Clinton, who commanded Fort Clinton, discovered the approach of the British forces before noon and sent a messenger to Gen. Putnam asking for reinforcements, but the messenger did not deliver the message. After fighting desperately until darkness the Americans, who had lost 300 men, abandoned the forts and escaped up the valley. One hundred guns and many supplies were lost, and the American fleet of small vessels which was above the chain could not escape and was burned. The British removed the chain, which they later took to Malta, and advanced up the valley as far as Kingston, where they learned of Burgoyne's surrender and withdrew to New York. The two forts were again occupied and held until the works at West Point were completed in 1778.

The Palisades Interstate Park is not large in area compared to the great national parks of the United States, nor can it compare in scenic beauty with the Yosemite, Yellowstone, and some others, but it has its distinguishing features which enable it to stand in the forefront with these national parks. The fact that this park is within easy reach of so many millions of people, that it is so cheap for the people to get there, and once there so cheap for them to enjoy the park, mark it as different from all other parks. The management of the park has always been of the best, carried on by men with the interests of humanity at heart. There is no other park in the United States that can afford such pleasures and at the same time perform such a great service to as many city workers as the Palisades Park of New York and New Jersey.





HIS EXCELLENCY SEÑOR DON BELTRAN MATHIEU, THE CHILEAN AMBASSADOR.

His Excellency, Señor Don Beltran Mathieu, the new Chilean ambassador to the United States, is 63 years of age, and was born in Talcahuano, Province of Concepcion. Señor Mathieu is a lawyer by profession, and from 1886 to 1890 was the first secretary of the Chilean legation in Washington, the minister at that time being Señor Domingo Gana. From 1891-1896, during two congressional periods, he was a member of the National Congress; from 1896-1901, minister plenipotentiary of Chile in the Republics of Ecuador, Central America, and Peru in succession; from 1901-1902, secretary of the departments of war and marine in the cabinet of President Riesco, and from 1902-1906, minister plenipotentiary to the Government of Bolivia for the purpose of negotiating definitely the peace treaty signed with that Republic in 1904. In 1910 Señor Mathieu was a Chilean delegate to the Pan-American Congress held in Buenos Aires, and in the same year he was secretary of the department of industry and public works during the tenure of the office of Vice President by Emiliano Figueroa.

PAN AMERICAN NOTES

THE SECOND ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF TEACHERS OF SPANISH.

THIS association, which is doing so much to advance the study of Spanish in the United States, held its second annual meeting in Barnard College, New York City, on December 28, 1918. The morning program consisted of addresses as follows:

"Spanish in the curricula of the high schools." Prof. John D. Fitzgerald of the University of Illinois.

"Spanish as a key to literary riches in America." Dr. Peter H. Goldsmith, director of the Inter-American Division of the American Association for International Conciliation.

"¿Como podemos estrechar las relaciones entre los Estados Unidos y los países de habla española?" Sr. Francisco J. Yánes, Assistant Director, and head of the Section of Education, of the Pan American Union, Washington, D. C.

Prof. Fitzgerald gave a detailed account of a committee, of which he was chairman, organized to make recommendations concerning the study of languages in the high schools of Illinois. This committee basing its work on that of a similar British committee made a careful study of American conditions and drew the following conclusions. If a school gives instruction in only one foreign language, that language ought to be a modern one; if in two languages, one ancient the other modern, the instruction in the modern language should precede that in the ancient tongue. While the modern language best suited to British conditions on account of the proximity of the countries is French, for a similar reason the modern language of greatest value for American study is Spanish. Therefore the Illinois committee recommended that the first language to be studied in high schools, no matter what others nor how many others be offered, should be Spanish.

Dr. Goldsmith, in beginning his address on the literary riches of America, declared the futility of instituting a comparison between languages. Anybody who attempted to decry the beauty of French or the value of French literature to the world would be demonstrating his own inaptitude. "French is the language of a nation; Spanish, the language of a world." This world comprises only in America 18 nations who are close neighbors to our own English-speaking world. The study of Spanish has value, then, in breaking down the barrier of language between us and the Spanish-speaking world.

What has this world to offer us in the realm of ideas? Its peoples possess and practice to a greater degree than we do the art of living largely, of taking time to observe the beauties of nature, and to enjoy the simple pleasures of social intercourse. Hence their views of life are largely expressed in poetry, a commodity difficult to export. There are so many poets in each one of the Spanish-American countries that one can not even know the names of them all. Of their best poets no translations, or only inadequate ones, exist. Spanish is therefore worth studying if only to read the poems of the marvelous Rubén Darío, of the inspired Cuban J. M. Heredia, or the Mexican nun Sor Juana Inés de la Cruz, of especial interest to the ladies as a seventeenth century feminist. Dr. Goldsmith read one of her famous sonnets, first in the original Spanish, then in a metrical version by himself.

Mr. Yánes urged the necessity of learning the language, above all, in order to lay the foundation for a perfect knowledge of the customs, moods, psychology, and daily needs of the Spanish-speaking peoples, "because as long as we do not understand one another and do not get closer to one another through the medium of language, which translates our thoughts, there will always be ground for distrust, suspicion, and mistakes which the necessities of the moment may perhaps lead us to tolerate, but which will not be forgotten and will accumulate and grow and ferment until they resolve themselves into unjust dislike and enmity, which have no reason whatever for being."

He also urged the necessity of studying, at the same time with the language, the geography, history, and literature of the Spanish-speaking nations of America, in order to understand the real nature of those peoples.

Reference was made to the endeavors put forth in the United States to foster a policy of real Pan Americanism; to the work accomplished and the high ideals upheld by the Pan American Conferences, whatever their character, scientific or political; and to the Section of Education of the Pan American Union, established upon the recommendation of these conferences in order to foster the intellectual development of the peoples of America.

The afternoon session of the association was opened by President Lawrence A. Wilkins, who congratulated the society on its growth and the progress which had been made throughout the country in the introduction of Spanish instruction in the schools. The secretary-treasurer, Dr. Alfred Coester, reported on the growth in the membership of the association which had doubled itself during the year. The finances of the association were also in a satisfactory condition and would enable the publication of two extra numbers of *Hispania* during the year 1919. The able editor of this journal of the association, Prof. A. M. Espinosa, of Leland Stanford Junior University,

gave a résumé of the work performed during the year with an outline of his ambitions for Hispania during 1919. As chairman of a committee on honorary members, Prof. Fitzgerald next read a list of 30 foreign Hispanists selected from different countries of the world. By their election the association closed its list of honorary members till vacancies occur by the death of some of the 30. The committee on correlation between colleges and high schools was heard through its chairman, Prof. S. M. Waxman, of Boston University, who made a lengthy report of technical interest to teachers.

The association then adopted for its seal a design described as follows in a report submitted for a committee on seal by Dr. Alfred Coester:

The seal of the American Association of Teachers of Spanish shall consist of a shield bearing a chief azure with one white star, above the lion of Leon, gules on a field argent, and the castle of Castile, or on a field gules. Over the shield shall be a scroll with the motto "Todos a una"; under the shield the date, 1917.

Dr. Coester explained that the star was used to symbolize all America, since 11 of the American Republics use stars either in their coats-of-arms or their flags.

Under the head of new business the association adopted motions that the president should appoint committees for the following purposes: First, a committee to investigate ways and means of inducing school boards to raise teachers' salaries, this committee to put the emphasis in its arguments on the point that the language teacher is under heavier expense than any other by reason of his necessity for travel in the countries where the language constituting his specialty is spoken; second, a committee to determine how schools where Spanish is taught may come into closer relations with business houses where Spanish is used.

Persons interested in the work of the American Association of Teachers of Spanish or desiring a sample copy of Hispania should write to its secretary, Dr. Alfred Coester, 1081 Park Place, Brooklyn, N. Y.

THE COLOMBIAN EXHIBITION IN NEW YORK.

A reception was given to the consuls general of the Latin American Republics January 4 in the Bush Terminal Sales Building, 130 West Forty-second Street, on the occasion of the opening of an exhibit of the natural resources, business conditions, and the life of the people of the Republic of Colombia. The exhibit was planned and assembled by John Cotton Dana, the noted librarian, and originally placed in the museum and library at Newark, N. J., and it is now open in the Bush Building in New York and may be inspected every day, except Sunday, between the hours of 9 and 5.30.

After the reception in the afternoon the Consuls Aurelia Rueda Acosta of Colombia, Carlos Castro Ruiz of Chile, Carlos Lara of Costa

Rica, F. Taboda of Cuba, Camillo Porras of Panama, Wallace White of Paraguay, Mario L. Gil of Uruguay, and Pedro Rafael Rincones of Venezuela assembled in the auditorium of the building on the ninth floor, where an audience composed of bankers, merchants, and exporters were addressed by Dr. Julius Klein, chief of the Latin American Division of the Foreign and Domestic Commerce Department of the United States, and Phanor J. Eder, of the Mercantile Bank of the Americas. Mr. R. G. Simonds, vice president of the Bush Terminal Co., was the chairman of the meeting and read a letter from Mr. Dana, who could not be present, in which he described his experiences in assembling the exhibit. He said that among the things which impressed him, as he came in contact with Colombia, were, first, the astounding riches of Colombia, and, second, the relative ease with which Americans can cause the land to pay rich returns. Another point that he expressed is that the intense interest in the South American development and the determination to make our relations with Latin America friendly and mutually helpful is now being shown by our own Federal Government. "And this, mind you," he wrote, "was in the midst of a most distracting war. I believe that if to the good will and wise intent of the Federal Government there can be added a little careful study and earnest work on the part of our men of affairs who will profit most by Latin American development, we shall, in the very near future, see the two halves of this great western continent teaching one another, helping one another, and greatly profiting one another."

Dr. Klein in his address explained the operations of the government department of which he is chief in their plans for aiding American merchants and exporters in information of all kinds, and with advice how to go about commercial relations between American merchants and Colombians. He answered many questions that were asked by merchants and exporters, and said that the Foreign and Domestic Commerce Department in any of its headquarters, had monthly reports on the wants and needs of Colombia, which were available to any who inquire.

Mr. Eder explained the chain of American banks now in existence as branches of the Merchantile Bank of the Americas in all the large cities of Colombia, where collections and deposits could be made and the financial details of trade with Colombia could be handled. He explained that Colombia, being second in coffee shipments until the war interfered with shipping, had a slump in the coffee trade, but in the long run it would be a good thing for Colombia, for it had turned their attention to their other wonderful resources and their agriculture increased many fold in the way of wheat, corn, rice, and their production of gold, silver, emeralds, hides, wool, platinum, and many of their other valuable resources. He said that all Colombians needed

was credit to enable them to get their resources out of the ground and these credits could be arranged through the American banks now in existence there. He also remarked that another evidence of the efforts of the United States for closer relations with Latin America was the installation of the Associated Press service in the newspapers of South America, which would mean that news by cable would be received back and forth and printed in all these countries each day.

Hundreds of interested persons have visited the exhibit since its opening in the Bush Terminal Sales Building. Many firms are preparing to send representatives to Colombia, and these men found the exhibit very helpful in information, as there are many explanatory maps, which show the country in detail with the locations of the resources plainly marked, and the methods of transportation through the country is explained.

The exhibit will remain in the Bush Terminal Sales Building about 30 days, and during that period several more lectures and meetings will be held.

A SPANISH EDITION OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The Pan American Union recently received a communication from the editor of The Journal of the American Medical Association stating that a Spanish edition of The Journal will make its appearance in January. This is most gratifying intelligence, for such a publication will add another link to the chain of common interests that forms the tie among all the American republics. The cordial relations between the United States and its sister nations are constantly growing closer and stronger, especially in political and commercial spheres. What is still lacking is a thorough understanding and a more general interchange of ideas among the members of the learned professions and scientific circles of the North American Republic and its Latin neighbors. That The Journal appreciates this situation and intends to do its part in bettering it, may be seen from the following excerpts from the editorial in its issue of December 7, 1918:

The question of establishing closer relationship with the Central and South American Republics, Mexico, Cuba, the Philippine Islands, etc., has long been regarded as an important one. The Pan American Union has been developing this spirit of friendship and cooperation for many years. While business and commercial relations have been developing very rapidly, thus far the scientific men of the United States do not seem to have appreciated the opportunities and the benefits that would result through mutual exchange of views and ideas and of the results of research and investigation. The medical problems of Latin America always have been essentially the same as ours; we have only to recall the comparatively recent epoch-making work of Finlay, Reed, Gorgas, Guiteras, Liceaga, and Cruz on yellow fever; of Ashford on hookworm disease; and of Strong on verruga peruana, to show how much is to be gained by making each other acquainted with what we are doing and what we have

already done. Our colleagues to the south of us have been looking more to France than to this country for their medical literature, and their medical students were more likely to go to those countries than to this for their undergraduate and post-graduate work. * * *

Preparations are now being made for the publication of the initial number early in January. For the time being the Spanish edition will be issued semimonthly. It is proposed to include in it practically all of the scientific matter that appears in The Journal. Original articles and editorials that are of local or very ephemeral interest will not be included, nor will it include the medical news listed under states, marriages, deaths, or matter of this character. In a word, everything that may be regarded as of general interest to the new readers, and especially all that is of permanent value, including, of course, the abstracts, current medical literature, and foreign letters, will appear in the Spanish edition.

It needs no prophet to forecast the fact that the relation, always close, between the democracies of North and South America will with every succeeding day become closer and more advantageous on both sides. The better we know each other, the better friends we shall be. Nowhere can this friendship be more fruitful than in the field of science, and especially in medical science. It is in this spirit of cooperation and confraternity that the American Medical Association is entering on this enterprise. It may be necessary to say that no financial gain is hoped for from this publication. If after several years it pays its own way it will be doing all that can now be expected from it. Rather, it may be said that the enterprise is begun wholly with the spirit of fostering true internationalism and with purely altruistic motives.

HISPANIC-AMERICAN ECONOMIC CONGRESS.

At the invitation of the Chamber of Commerce of Seville, the National Congress of Economics, held in Valladolid voted that the next congress should be held in the capital of the Andalusian Province. The president of the chamber proposes to invite all economic organizations to be represented, and especially the chambers of commerce of Spain and all the American Republics, for the purpose of linking the economic congress with the commemoration of the fourth centennial anniversary of the first voyage accomplished round the world, which was undertaken by Magellan when he set out from Seville in 1519.

The projected congress is to open its sessions October 12, 1919, anniversary of the discovery of America. Besides commemorating events of world-wide significance, economic issues affecting both Spain and the New World will be considered by the chambers of commerce and other economic bodies of the Peninsula and America. The president of the cabinet and the ministers of state and treasury of Spain have assured the president of the Chamber of Commerce of Seville of their official as well as personal support for the success of the enterprise.

TWENTIETH CONGRESS OF PAN-AMERICANISTS.

The next meeting of the International Congress of Americanists (the twentieth), will be held in the city of Rio de Janeiro from the

18th to the 30th of the coming June. Sessions will take place in the halls of the National Archives, the Geographic Society, and the National Library. The congress will be held under the auspices of the National Museum, the Historic and Geographic Institute of Brazil, the National Library, the Geographical Society, the National Archives, and the "Fluminense" Historic and Geographic Institute, and with the cooperation of the National Academy of Medicine, the Association of Lawyers of Brazil, the Engineering Club, the Geological Service, the Indian Service, the General Board of Telegraphers, the Astronomical Observatory, and the National School of Fine Arts.

Besides several excursions of a scientific and recreative character during the sessions the museums, historic and geographic institutes, institutions of higher learning, and other headquarters of subjects to be considered by the congress, will be visited. Those who wish to take part in the coming congress should send the subject of the paper they will present to the general secretary before May 30, together with an outline of the thesis. Dr. Lauro Müller is president of the committee on arrangements and Dr. Alfredo Mariano de Oliveira, whose office is in the Geographic Society of Rio-de Janeiro, is secretary general.

A CORRECTION.

The attention of the BULLETIN has been called to a quotation used in the notes on Haiti in its October, 1918, number on page 614, in which the statement is made that "the language of the island is French, its schools, theaters, and hotels are French, and likewise its wines," etc. How such a misstatement escaped the editorial blue pencil is perhaps inexplicable, except that in reading the matter quoted the impression that it referred only to the Republic of Haiti was so strong that the use of the word "island" escaped notice. As our readers well know, approximately two-thirds of the area of the island constitutes the Dominican Republic, a country entirely Spanish in language, origin, customs, etc., while the Republic of Haiti, where French is spoken, occupies only the western third. Incidentally in the same number of the BULLETIN a map was used in connection with the article "Coal Resources of the Americas," for the purpose of showing the location of the great coal deposits of the Western Hemisphere. A close scrutiny of the map reveals the fact that the cartographer who drew it failed to show the Dominican Republic as occupying the major part of this island, which is called the Island of Haiti by some map makers, the Island of Santo Domingo by others, and which was first called "Hispañola" by its Spanish discoverers. This defect in the map remained undiscovered until after the English edition of the BULLETIN had come from the press. The map in question was withdrawn from the other language editions that carry the article.

AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINE REPUBLIC.

Direct steamship communication between Cape Town, Durban, and Buenos Aires has had the effect of rapidly increasing COMMERCIAL TRANSACTIONS between the Argentine Republic and Southern Africa, large quantities of tea, shelled fish in cans, salt, coal and other articles having been sent to the Argentine Republic in exchange for sole leather, hides, boots and shoes, etc.

According to a report of the Bureau of Statistics of the Argentine Government the FOREIGN COMMERCE of that country during the first half of 1918 was 591,592,678 gold pesos (gold peso = \$0.9648), of which 209,896,111 gold pesos were imports, and 381,696,567 gold pesos were exports, or an excess of exports over imports of 171,800,456 gold pesos.

The AREA SOWN TO CEREALS in the State of Santa Fe in the agricultural year 1918-19 was 1,202,380 hectares of wheat, 663,913 hectares of flax, 55,336 hectares of barley, 60,905 hectares of oats, 2,885 hectares of alpiste or birdseed, and 1,590 hectares of rye.

The governor of the Province of Buenos Aires has authorized Federico Brown to install and operate 10 ELECTRIC LIGHT AND POWER PLANTS in that Province for a period of 20 years. These installations are to be strictly modern in their entire equipment.

BRAZIL.

In March, 1916, direct steamship service by a ROUMANIAN LINE was commenced between Brazilian ports and Roumania. This traffic was interrupted by the war, but preparations are now being made to reestablish it on a larger scale, employing for this purpose 10 vessels of 6,500 tons each, which are to ply from the Roumanian port of Braila to Brazilian and Argentine ports, touching at Galata, Odessa, Trebizond, Constantinople, Salonika, Athens, Smyrna, and Alexandria. This line offers a splendid opportunity to Brazil for the expansion of her commerce in the part of the world mentioned, as well as with other countries in easy reach of these places. Roumania and Bessarabia consume large quantities of Brazilian coffee, and the operation of this line will enable this staple Brazilian product to be quickly placed in these countries at a reduced freight rate. It is believed that the transportation offered by this

line will induce emigrants from the Balkan States to go to Brazil, and especially agricultural emigrants, to whom Brazil offers great inducements.

The IRON SMELTER at Sabana, State of Minas Geraes, one of the largest and most important installations of its kind in South America, will soon be completed and put into operation. The daily capacity of the plant is from 25 to 35 tons of ore. The company has a large quantity of fuel and raw material on hand and will begin work as soon as the machinery is received and set up.

CHILE.

Since the beginning of the European war SWEDISH-CHILEAN COMMERCE, which before that time was insignificant, has steadily grown in importance. The imports into Chile from Sweden in 1914 were valued at 64,962 gold pesos (gold peso=\$0.365); in 1915, at 1,348,599 gold pesos; in 1916, at 1,964,513 gold pesos, and in 1917 at 2,191,326 gold pesos. The exports from Chile to Sweden in 1915, 1916, and 1917, expressed in gold pesos, were 2,280,685; 1,089,478, and 2,358,783, respectively. Among the articles imported from Sweden, which formerly came from other countries, were printing paper, electric and metallurgical supplies, etc.

The NATIONAL DAIRY CONGRESS, which closed its sessions in Santiago on November 3, 1918, recommended, among other things, the establishment by the Government of a Department of Agriculture and Colonization; the enactment of a law making obligatory the tuberculinization of cattle; the pasteurization of milk; the establishment of chemical municipal laboratories with sections for analyzing food substances; the maintenance of a national laboratory for the preparation of vaccine virus; the establishment of dairy experiment stations; the organizing of cooperative societies for the sale of hygienic milk in cities; the manufacture of products for export and their shipment abroad in vessels equipped with cold-storage plants; the establishment of dairy schools in the central and southern parts of the country; the teaching of dairying in the rural normal schools of the Republic, and the holding in Buenos Aires in September next of an International Dairy Congress.

On November 9, 1918, the first of the FURNACES FOR THE MANUFACTURE OF STEEL of the Electric Metallurgical Co. commenced operations. Plans have been made for the enlargement of the plant as soon as possible.

Under a contract concluded in London on October 3, 1918, between the minister of Chile and the Government of Great Britain, the former agreed to sell to the latter 680,000 tons of NITRATES at the rate of from 13s. to 13s. 6d. per quintal. The delivery of this nitrate was made in December last.

COSTA RICA.

As the result of the propaganda in Costa Rica for increasing the area of CULTIVATED LANDS, it is estimated that the area sown to rice in 1918 was 30 per cent greater than that of 1917, while the acreage planted to corn in 1918 increased about 7 per cent as compared with the area of this cereal cultivated during the previous year. In 1918 the wheat and bean crops were about 10 per cent greater than in 1917.

MEXICO.

According to newspaper reports the harvest of CHICK PEAS recently gathered in the States of Sinaloa and Sonora exceeded 24,000 tons. This crop was sold in the United States for a sum aggregating, in round numbers, \$4,500,000.

The Department of Industry, Commerce, and Labor has issued to Aurelio Rangel, a farmer living at Comala, State of Colima, a patent covering a NEW PLOW of an extremely simple type and which is said to possess great advantages over the ordinary plow. The plow is constructed in such a way as to reduce its weight and improve its balance so that much less animal power is required to move it.

URUGUAY.

The Uruguayan Government recently authorized its consul in New York to purchase 10,000 tons of COAL in the United States and contract a sufficient supply of that fuel to meet the needs of the Republic.



ECONOMIC^{AND} FINANCIAL AFFAIRS

ARGENTINE REPUBLIC.

A report of the business transacted in 1917 by the POSTAL SAVINGS BANK shows that the deposits for that year were 9,418,548 pesos, national currency, and the withdrawals 5,745,839 pesos, national currency (paper peso = \$0.4245). The total receipts of this bank from all sources during the year referred to, including interest, fines, etc., were 10,082,248 pesos, national currency.

BOLIVIA.

The President of the Republic has authorized the Municipal Council of the State of Potosi to negotiate a loan, not exceeding 200,000 bolivianos (boliviano = \$0.3893), for the purchase and equipment of a HOUSE FOR THE STORAGE OF PROVISIONS, issuing in payment therefor municipal bonds bearing interest at the rate of 8 per cent per annum and containing provisions for a 2 per cent annual amortization fund.

BRAZIL.

In 1917 the receipts of the LEOPOLDINA RAILWAY amounted to £1,580,241, as compared with £1,319,657 in 1916. About 69 per cent of the receipts were expended in extending the company's lines. The increase in gross revenues in 1917 were due to the large freight traffic which produced a surplus equivalent to £180,868. For that year the company paid a dividend of $1\frac{1}{2}$ per cent on the common and $2\frac{3}{4}$ per cent on the preferred shares.

CHILE.

The finance committee of the House of Deputies of the Chilean Congress has made a favorable report on the bill authorizing the President of the Republic, for a period of three years, to contract for account of the municipality of Iquique a LOAN of £300,000 guaranteed by the National Government. This loan is to bear interest at the rate of 5 per cent per annum, and provides for an annual sinking fund of not less than 1 nor more than 2 per cent. The proceeds of the loan may be delivered in installments of not less than £50,000 as the money is needed. This money is to be expended in the construction of sewers, the paving of the streets, the erection of a model market, enlarging and improving the slaughterhouse at Iquique, and in the construction of sewers and in the equipment of the fire department at Caleta Buena.

The sum of 62,700 pesos has been made available for use in completing the Coihuaco to Niblinto RAILWAY, construction work on which was commenced some time ago.

COSTA RICA.

The Executive Power has authorized the International Bank of Costa Rica to issue 1,000,000 colones (colon=\$0.3893) in BANK BILLS, which amount is the first installment of the sum authorized under the law of October 5, 1918.

CUBA.

On November 20, 1918, one million dollars in United States paper currency was received in Habana via Florida. This remittance, like previous ones of a similar nature, forms part of the \$15,000,000 loan made to the Government of Cuba by the Government of the United States.

ECUADOR.

An Executive decree of September 28, 1918, modifies in a number of particulars the law concerning the construction of the QUITO TO ESMERALDAS RAILWAY. The legislative decrees of September 6, 1913, October 4, 1913, and October 13, 1916, providing funds for the building of the said railway are declared to be in force, and the territorial tax established under the decrees referred to is fixed at the rate of 3 mills annually, but with the proviso that the Provinces subject to this tax shall only pay 1 mill as a local road and general territorial tax. Said funds are to be collected by the railway board, which, with the approval of the Government, may negotiate a loan to be used in the construction of the railway and for expenditures connected therewith, the loan to be guaranteed by the revenues set aside by law for that work. The board is also authorized to recover the Pailon lands for use as a terminal, or procure lands at such other place on the coast as may be agreed upon.

MEXICO.

The manager of the Vera Cruz Railway has petitioned the Department of Communications and Public Works for authority to extend its BRANCH LINE, which runs from Muñoz Station to Chiguahupam, to the town of Zacatlan, an important agricultural and commercial center of the State of Puebla.

PARAGUAY.

During the first half of 1918 the CUSTOMS REVENUES from imports amounted to 96,233 gold pesos and 18,333,962 paper pesos, respectively. The export revenues were 300,390 gold pesos and 60,397 paper pesos, respectively. These revenues for the inland

service, during the time referred to, were 651 gold pesos and 520,044 paper pesos, or a total collection in gold and paper pesos of 397,174 gold and 18,914,403 paper pesos, respectively.



INTERNATIONAL TREATIES

On November 13, 1918, a GENERAL ARBITRATION TREATY was concluded in Bogotá between the representatives of the Governments of Bolivia and Colombia, under the terms of which the contracting parties agree to submit to arbitral decision all controversies of whatever nature that may arise between them, provided always that such controversies are not settled through diplomatic channels, with the sole exception that questions within the usual jurisdiction of the courts of the countries in interest are not covered by the treaty. The arbitrators are to be appointed from among the heads of the States of the American countries, or from among judges or experts of the American Republics. Should there be no agreement concerning the appointment of arbitrators, the high contracting parties shall submit their differences to the permanent court of arbitration in conformity with the provisions of The Hague Convention of October 18, 1907, and in accordance with article 43 of said pact. In each particular case the parties shall sign a special agreement for determining the nature of the dispute, the formation of the arbitral court, and the rules of procedure. This treaty is to remain in force for a period of 10 years, and if not abrogated at the expiration of that time it is understood that it will be renewed for another period of 10 years, and so on successively.

A TREATY OF AMITY, COMMERCE, AND NAVIGATION was concluded in the city of Washington on August 26, 1918, by representatives of the governments of Ecuador and Japan. The treaty referred to contains the usual stipulations based on an equality of condition of the citizens of the high contracting parties. It is expressly agreed that any favor, privilege, or immunity in matters relating to commerce, navigation, industry, travel, and residence granted, or which may hereafter be granted by either of the countries in interest to citizens of any European or American nation, either gratuitously or on the same or equivalent conditions if the concession should be conditional, shall apply to the citizens of either of the contracting parties. This treaty becomes operative from the date of the exchange of ratifications and remains in force for a period of one year after the date on which either of the contracting parties duly notifies the other of its intention to abrogate same.

PUBLIC INSTRUCTION AND EDUCATION

ARGENTINA.

The Department of Agriculture has for some time fostered AGRICULTURAL EDUCATION in every way possible, and since the close of 1916 sixteen courses have been offered in rural domestic science for women in the principal rural centers of the country in the Provinces of Buenos Aires, Santa Fe, Entre Ríos, Córdoba, La Rioja, Tucumán, Catamarca, Santiago del Estero, and Salta. Instruction was given by competent professors who were graduated from the Rural Domestic Science School of Tandil (Escuela del Hogar Agrícola del Tandil) at the time of its operation in 1916 and 1917.

The courses deal principally with the dairying industry; the making of butter and cheese; aviculture; the raising of hogs; apiculture; arboriculture; horticulture, and the conservation of fruit and vegetables. To the present time more than 500 farmers' daughters have taken advantage of the courses, in spite of the fact that enrollment was limited by the funds available. In Tucumán steps are being taken toward establishing the school on a permanent basis, as also in 25 de Mayo (a Province of Buenos Aires) and other places where private associations are working for the same end.

BRAZIL.

According to the report of the vice consul of the United States, Richard P. Momsen, published in the Commerce Reports of December 20, 1918, the President of Brazil, by a decree of September 16, 1918, has authorized the expenditure of 100,198 milreis (approximately \$25,000), for the support this year of 96 schools of agriculture established in the agricultural colonies of the State of Parana. Agricultural education during the past five years in Brazil has developed remarkably, and the Government has not stinted efforts in encouraging this important branch so vital to the progress of scientific agriculture needed to develop the native potentialities of the wealthy Republic.

CHILE.

The Society for the Development of Manufacturing has energetically undertaken the reorganization of PUBLIC TECHNICAL INSTRUCTION in accordance with the progress accomplished in this branch during the past decade. The following schools are under its consideration: School of Ornamental Drawing, with sepa-

rate sections for men and women. The object of this school is to diffuse a knowledge of drawing and decorative painting collateral with the artistic professions. **SCHOOL OF INDUSTRIAL AND TECHNICAL DRAWING**, in which practical instruction necessary for executing detailed sketches showing the union of parts of machines, as well as an exact comprehension of designs and drafts, is given. The **SCHOOL OF ELECTRICIANS** gives, besides a general knowledge of the subject, the principles and manner of operation of electrically-driven machines. This training is completed by a special course in mathematics and schematic drawing of installations, instruments, and machines. Finally, the **SCHOOL OF MECHANICS** specializes in rough drafting of pieces and parts of machines and in the designing of machinery for factories, and there is included also a course in which steam, gas, and hydraulic apparatus is studied.

A large group of citizens of Valparaíso have petitioned the President of the Republic to accelerate the opening of the **INDUSTRIAL UNIVERSITY** of Valparaíso (*Universidad Industrial de Valparaíso*), the establishment of which was authorized by law No. 3090. By its creation the cycle of industrial education in Chile will be completed, which at present consists of three steps: Elementary training in the industrial schools already established in Chillan and Temuco and in those to be established at Antofagasta, Valparaíso, Talca, Concepción, Valdivia, and Puerto Montt; the secondary, which is given in the School of Arts and Crafts, to the development of which the Government is lending especial attention; and the superior, in the Technical Industrial School of Valparaíso. For the latter a commission has been designated composed of competent engineers, reputable teachers (foreigners and natives), and specialists in the subjects the schools will offer, the commission to study and propose programs of technical and practical training.

CUBA.

At the instance of the secretary of public instruction the President of the Republic has signed a decree by which two loans of \$16,000 and \$25,000, respectively, will be taken from the treasury for the normal schools of Santa Clara and Santiago de Cuba. While fostering normal training with these funds, the Cuban Government has promulgated laws and regulations tending to make normal instruction stricter, with the purpose of providing a body of professors more competent and adequately prepared for the discharge of their manifold duties. To this end a special regulation has been issued relative to the recognition of foreign diplomas of normal-school teachers. Such diplomas and credentials must be presented to the secretary of public instruction, together with certificates of good conduct and morality, and, in addition, the candidates will be subject to the laws for native applicants who desire to enter the profession.

URUGUAY.

At the time this number of the BULLETIN goes to press there is being held in Montevideo the American Congress of Commercial Education, an assembly which will without doubt bring forth splendid suggestions for the bettering of commercial education in America. The importance of the congress and the character of the discussions may be seen by noting the topics listed below, which are to be given particular attention, according to a decree of the President of Uruguay:

(A) Economic commercial expansion.

I. Investigation of the natural resources of the American Continent.

II. Natural, commercial, and industrial resources of America.

III. Means of economic and commercial exchange among the peoples of the continent.

IV. Method of communication among all the countries, prices of transportation, laws, enactments, and tariffs concerning merchandise for transportation.

V. Agreements relative to commercial classifications of merchandise of the custom-house tariffs.

VI. Cooperation which, for the purpose of commercial economic expansion, the diplomatic and consular service, seconded by commercial enterprises, should lend.

VII. Value of reaching agreements concerning statistics, needs of industry, sources of production, and economic development of every country, with proper adjustment of consular decisions, with especial reference to the counsels and commercial attachés of the respective legations.

VIII. Value of credit for rapid commercial expansion.

IX. Analysis of the inter-American political economy in its present state, to determine through the results of experience if the situation is satisfactory compared with America's state.

X. Influence of Pan Americanism in commercial relations of the peoples.

XI. Effects of the present war upon the economic commercial life of the Americas.

XII. Commercial propaganda through the daily press, newspapers, books, pamphlets, posters, etc., or by expositions, permanent museums, and profuse distribution of articles.

Discussion as to the most advantageous form of propaganda in consideration of character and present economic and commercial conditions of the Americas.

XIII. The traveling salesman. Preparations of such salesmen. Form of remuneration.

(B) Commercial instruction.

I. From what point, how, and by what means commercial education should be developed in the American Continent; extent and subdivision of such instruction.

II. Means of stimulating acquaintance among the peoples of the Americas.

III. The centers of commercial education as professional schools, as institutions of modern culture.

IV. Should courses in business ethics be included in the curriculum in the advanced classes? Morale, character, and culture of students of commerce and of consular service.

V. Universal history of commerce as an indispensable element in the training of competent consuls.

VI. Are screen films necessary in giving instruction in commerce and geography?

VII. Countinghouse practice.

VIII. How should commerce be taught?

IX. Tables of mortality.

X. Reading of minutes.

XI. Teaching of languages in the centers of commercial education.

XII. Preparation of women for a commercial career.

GENERAL NOTES

ARGENTINE REPUBLIC.

On October 26, 1918, the inauguration of the new building constructed in the City of Buenos Aires for use as the headquarters of the Spanish MUTUAL BENEFIT SOCIETY took place. This organization, which has been in existence 62 years, has 26,000 members. The building is 10 stories high and cost 3,500,000 pesos, national currency. About one-third of the space of the structure referred to is used for offices and social functions.—The La Croze TRAMWAY CO. of Buenos Aires opened to public traffic in October last its new lines, which traverse thickly populated sections of the National Capital.—The house of deputies of the Congress of Peru resolved in November last to offer a GOLD MEDAL to Dr. E. S. Zeballos, a distinguished Argentine statesman and writer, as a manifestation of the respect and esteem in which he is held by the Peruvian Government and people.—Federico Alvarez y Toledo, who was recently secretary of the navy of the Argentine Government, has been appointed minister plenipotentiary near the Government of Great Britain.

BOLIVIA.

Work has been resumed on the SUCRE THEATER in the city of that name. It is reported that the National Congress will appropriate a considerable sum of money to be used in completing this beautiful edifice and in securing suitable furnishings for the same.—The bid of Miguel Nogué, amounting to 52,775 bolivianos (boliviano = \$0.3893), tendered for the construction of the Oruro NATIONAL CUSTOMHOUSE building, has been accepted. Work is to be commenced immediately and the structure is to be completed at as early a date as possible.—Preliminary steps have been taken for installing an ELECTRIC light and power plant at Trinidad, Department of Beni.—Work on the new HOSPITAL at Potosí, the cornerstone of which was laid on November 10, 1918, has been commenced. The hospital is to be modern in every respect, and will be equipped in the most scientific and up-to-date manner.

BRAZIL.

Under rules and regulations promulgated by the President of the Republic for combatting and preventing endemic fevers, especially in the rural sections of the country, the Government proposes to use

QUININE as its chief remedy, purchasing the same in the home or foreign market in the form of salts of quinine. Cinchona bark will also be imported and delivered to the Oswaldo Cruz Institute at Rio de Janeiro, which will extract the salts therefrom. This quinine is to be placed in tubes, officially sealed, labeled and furnished to pharmacists to be sold at a price not exceeding 10 per cent in excess of the cost price to them.—The heavy frosts which occurred in Brazil some months ago greatly damaged the CASTOR BEAN PLANT, so that the quantity of that oleaginous seed available for export from the Republic in the near future will be very limited. Of the cereal crops corn and rice are most promising at the present time, and it is believed that the surplus of these products for export in 1919 will be equal to, if not greater, than that of 1918.—One of the great industries of the State of Espirito Santo is the mining of MONAZITE SANDS, which are estimated to cost at the plant, including mining, concentrating, bagging, etc., from \$17 to \$23 per ton. This industry, which was formerly in the hands of the Germans, is now largely controlled by the United States.

CHILE.

The official plans submitted by Messrs. Doyere and Isarraazabal Lira for the construction of the NEW GOVERNMENT PALACE in Santiago have been definitely approved. The structure, which is to be made of reenforced concrete, will occupy an entire block fronting Delicias Avenue. The edifice is to be erected under the direction of Mr. Isarraazabal.—In September, 1919, the SECOND CHILEAN MEDICAL CONGRESS will meet in Santiago. Among the subjects which it is proposed to discuss at that congress will be the application of the law concerning accidents to workmen, medical hospitals, demographic statistics, tuberculosis, and the use of alcoholic drinks.—On October 24 last the placing of a BRONZE PLAQUE, presented by the Argentine people, on the tomb of Gen. O'Higgins in the cemetery at Santiago, in solemn commemoration of the death of that great Chilean patriot, took place with appropriate ceremonies.—A bill has been introduced into congress authorizing the President of the Republic to call for bids, both in Chile and abroad, for the construction of works for the PROTECTION OF THE PORT OF VALPARAISO, the price of same not to exceed £1,470,000.

COLOMBIA.

The TELEGRAPH BUSINESS in the Republic of Colombia has increased very rapidly during the last few years, the number of monthly messages handled having jumped from 42,300 in 1910 to 88,000 in 1918.—A committee has been appointed by the Govern-

ment of Colombia to study the ANCIENT RUINS recently discovered at Aguabonita to the south of Huila. The committee proposes to examine the ruins in detail and report upon the ancient statues existing at that place, and, if possible, will make excavations into these prehistoric ruins.—The board of trade at Barranquilla has solicited the cooperation of the board of trade of Cali in securing an extension to Cartagena and Barranquilla of the STEAMSHIP SERVICE now carried on with the Colombian Pacific coast ports of Buenaventura and Tumaco.

COSTA RICA.

The LAW SCHOOL at San Jose has elected its officers and board of directors for 1919, as follows: Licentiate Pedro Pérez Zeledón, president; Licentiate Alejandro Alvarado Quirós, Licentiate Victor Vargas Quesada, Licentiate Manuel Sáenz Cordero, Licentiate Adán Acosta, and Licentiate Oscar Padilla, members of the board of directors; Licentiate Tomás Fernández Bolandi, attorney; Licentiate Jorge Herrera, treasurer; and Licentiates Arturo Saenz and Guillermo Echéandi, secretaries.—Land has been acquired at Lazareto Viejo on which to erect a SCHOOL BUILDING for the use of the district of San Francisco at Mata Redonda. The land purchased has an area of 2,810 meters.—According to *La Información*, a daily newspaper of San Jose, congress has approved the corrected copy of the New Penal Code, so that same is now ready for the printer. Senator Astúa has been placed in charge of the printing and correction of the proofs.

CUBA.

Immediately after the confirmation of the cablegram announcing the lamented death of ex-President Theodore Roosevelt the municipal council of the city of Habana passed a resolution appropriating \$500 for the purchase of a portrait of the late Col. Roosevelt to be placed in the council chamber of that body in Habana, \$25,000 for a monument to be erected in his honor in one of the parks of the city of Habana, \$500 for a wreath of flowers to be purchased by the Cuban consulate in New York to be laid upon his tomb, changed the name of Tacon street in the national capital to Roosevelt Street, and ordered all flags on the municipal buildings to be flown at halfmast.—According to reports published in the Cuban press the Royal Mail STEAMSHIP CO. proposes soon to establish a freight and passenger service between England, Spain, the United States, and Cuba. The Pacific Steam Navigation Co. will also establish a service between New York and the Pacific coast ports of South America, via the Panama Canal.—During the first week of the present year there were 85 mills at work on the new SUGAR CANE

crop, which promises to be the largest in the history of the island.—Reports from the Santa Barbara CANNERY at Santa Barbara, Isle of Pines, are to the effect that the cannery will be in more active operation this season than ever before, inasmuch as it has been able to obtain all the cans and other supplies needed in carrying on its work.

DOMINICAN REPUBLIC.

It is estimated that about 75 per cent of the TOBACCO CROP of the Dominican Republic is grown in the Province of Santiago, 15 per cent in the Province of Puerto Plata, and 5 per cent each in the Provinces of La Vega and Espaillat. The annual yield of Dominican tobacco is, approximately, 11,000 tons, most of which finds a market in Europe.—In 1917 the San Luis SUGAR PLANTATION produced 37,000 sacks of sugar, 43,000 sacks in 1918, and the estimated production for 1919 is 65,000 sacks. A number of improvements are being made at this plantation, among which may be mentioned the construction of several kilometers of railway, a paved highway, and a small but modernly equipped abbatoir.—A society of BOY SCOUTS was recently organized in Santiago de los Caballeros. This organization is becoming very popular in the Dominican Republic, and it is proposed in the near future to found a number of societies in different parts of the country.

ECUADOR.

Dr. Gonzalo S. Cordova, formerly minister of Ecuador in Washington, was recently elected PRESIDENT OF THE SENATE of the Ecuadorean Congress.—Congress has elected the following justices of the SUPREME COURT: Dr. Alejandro Cárdenas, Dr. Albán Mistanza, Dr. Leopoldo Pino, Dr. Modesto Peñaherrera, and Dr. Pablo A. Vascones. Dr. Adolfo Paez was elected attorney of the court.—The concession for the construction and conservation of the MOUNTAIN ROAD from Punto de Portavelo to Santa Rosa, granted to the American Development Co., has been extended for an additional period of six years.—A law was recently promulgated under the terms of which the municipality of Quito acquires land in the national capital formerly belonging to the Concepcion convent, half of which is to be used as a site for the NEW MUNICIPAL BUILDING and the other half for the legislative palace.

GUATEMALA.

On November 21 last the new INDEPENDENCE BOULEVARD, a beautiful driveway extending from the army monument to Barranquilla Bridge, was opened with appropriate ceremonies to public traffic.—On November 9, 1918, the minister of France near

the Government of Venezuela announced to Licentiate Manuel Estrada Cabrera, president of the Republic of Guatemala, that the French Government had conferred upon the latter the GREAT CROSS OF THE LEGION OF HONOR, and at the same time delivered to him the diploma and decorations of that order sent by the department of foreign relations of the Government of France.

HAITI.

According to press reports the reorganized CABINET of the Haitian Government is as follows: M. Constantin Benoît, secretary of foreign relations and justice; M. Fleury Féquière, secretary of finance and commerce; M. Dantès Bellegarde, secretary of public instruction and worship; M. Louis Roy, secretary of agriculture and public works; M. B. Dartiguenave, secretary of interior. M. Dantès Bellegarde, secretary of public instruction, has been honored by the French Government by a promotion from officier d'Academie to the rank of Officier d'Instruccion Publique.—Señor Antonio Urbina Fajardo, representative of the United Fruit Co., has come to Haiti to recruit 2,500 HAITIAN LABORERS, who will be sent to Cuba to work in the company's plants.—Le Comptoir industriel haitien is the name of a new COMMERCIAL FIRM which opened a large store in Saint-Marc. The steamship *Neptunus* from New York arrived at Port au Prince a short time ago with a large cargo of merchandise consigned to Haitian ports.

HONDURAS.

The Government of the United States has granted a patent of invention to Dr. Leopoldo Cordova, jr., a Honduran citizen, for a new HEATER attachable to chimneys and smokestacks, and which device, it is claimed, saves 40 per cent of the fuel ordinarily consumed and adds 60 per cent to the quantity of heat obtained.—According to the constitution and by-laws of the Honduras SPORTING LEAGUE, this organization is a corporation founded with the object of encouraging healthful amusements, sports, and outdoor games for the purpose of aiding the physical and moral development of its members. The organization has its headquarters in Tegucigalpa.

MEXICO.

El Universal, a daily newspaper of the City of Mexico, states that influential Norwegian capitalists propose to establish a BANK in the City of Mexico, with a branch in the city of Guadalajara, under the name of the Norway and Mexican Banking Co.—On the west coast of the Republic, and especially in the States of Guerrero, Michoacan, and Jalisco, crops of CEREALS of considerable impor-

tance were harvested in 1918. It is estimated that the grain production in the States referred to will be sufficient to meet the local demands and leave a surplus for export to other parts of the Republic.—A bill has been introduced into the Mexican Congress providing for a COMPULSORY SAVINGS SYSTEM for workmen, based on a fund raised and maintained by the payment of a certain percentage of their income.—The National Board of Trade of the City of Veracruz has been invited by the Board of Trade of Liverpool to send a number of Mexican students to the latter place for educational purposes, and especially with the object of studying BRITISH COMMERCIAL METHODS. Students who lack resources are promised work at remunerative wages.—The Torreon METALLURGICAL CO., which recently temporarily shut down its smelter due to lack of ores, has again commenced operations and is reported to be doing an active business.

NICARAGUA.

The agricultural school at Managua was recently presented by Dr. Solórzano, *chargé d'affaires* of the Mexican Government near the Government of Nicaragua, with SILKWORM LARVÆ, as well as with seeds of a number of Mexican plants.—During the last few years considerable attention has been given in Nicaragua to the cultivation of the CASTOR OIL PLANT, which, at the present rate of increase in acreage will soon become one of the most important and promising agricultural productions of the country. A dealer in Granada is reported to have recently bought about 50 tons of castor beans, or practically the total crop of that part of the country.—The Department of Fomento (Public Improvement) has granted a license to Pánfilo J. Sobalvarro to DISTIL TURPENTINE on his ranch in Diplito, Department of Nueva Segovia. The license referred to is renewable annually at the option of the Government.

PANAMA.

According to reports recently received from the Isthmus, the United Fruit Co. is continuing the plan adopted some time ago concerning the planting of its abandoned banana lands in the Provinces of Bocas del Toro to COCONUT GROVES and cacao plantations. It is estimated that the company has at present 45,600 coconut trees planted on 912 acres of land. Most of these are young trees and will not come into bearing for four or five years. This same company is reported to have cacao plants and trees to the number of nearly 3,000,000 set out over an area of about 7,000 acres. A number of other persons, principally Americans, are engaged in this industry in Panama at Cocoplum Point, about 100 miles west of Colon. These interests have about 95,000 young plants set out

and some 5,000 trees in bearing. It is estimated that when all of the coconut trees and plants cultivated in this section of Panama come into full bearing that coconuts by the millions will be available for export from Colon.—The ICE and cold storage plant of the Panama Canal at Mount Hope was ready for use at the beginning of the present year. There is an ice factory located at Colon which supplies the local trade.—The municipal council of Colon recently considered the adoption of a resolution requiring MOVING-PICTURE shows to have titles and descriptive matter thrown upon the screen in Spanish. The newspapers and patrons of the moving-picture theaters are advocating the measure.

PARAGUAY.

The bank of Spain and Paraguay, with headquarters in the national capital, recently made a detailed investigation of the business conditions and prospects of the Department of Misiones, and as a result of same has decided to open in the near future a BRANCH BANK in the town of Misiones. The Misiones district is one of the most famous and promising sections of the Paraguayan Republic, and during the period of Jesuit rule attained a high state of civic, educational, and industrial development. The department contains some of the richest agricultural lands in the country, and, with the increased transportation facilities which have been given this region within the last few years, a notable revival of business has taken place.—The NATIONAL DEPARTMENT OF HYGIENE and public charity of Asuncion in order to better facilitate its work in the national capital, has divided the city into nine health zones. This enables the sanitary authorities to quickly and properly attend to their duties, and to more efficiently cope with any diseases which may be inclined to develop into epidemics. These nine divisions have thoroughly equipped health stations and a competent personnel, ever ready to combat, curb, and prevent the spread of contagious and infectious maladies.—The municipal authorities of the city of Asuncion recently adopted and put into effect NEW TARIFF RATES to be charged for public automobile service rendered within the municipality of the national capital.

PERU.

Ladies of the Peruvian colony residing in Paris have founded a HOSPITAL in the French capital to be used in caring for the sick and wounded. It is understood that this hospital is to be run in cooperation with the Red Cross.—According to press reports Gen. Oscar Benavides has been appointed MINISTER of Peru to Italy, and Señor Amador del Solar minister to the Argentine Republic.—

On December 1, 1918, the LIMA SAVINGS BANK celebrated its fiftieth anniversary. Señor Manuel Pardo, who afterwards became President of Peru and whose son is now President of the Republic, took an active part in founding and directing the business of this bank in the early years of its existence. The first year the bank had 688 customers, whose deposits aggregated £7,131, as compared with 18,217 accounts in 1918 aggregating £660,751.—The war department recently selected from unmarried lieutenants and sergeants now in the Peruvian army between the ages of 20 and 30 years, a number of AVIATION STUDENTS, whom it is proposed to send to the Argentine Republic to study aeronautics. Upon the satisfactory completion of their studies they are to return to Peru and serve three years in the army. Lieut. Guillermo M. Protzel, a young Peruvian, has returned from the Palomar Aviation School in Buenos Aires, from which he recently graduated with honors. He and other aviators are to be employed in the aviation school in Peru which the Government proposes soon to establish.

SALVADOR.

According to the Annual Statistical Bulletin of San Salvador the area of that Republic is 34,126 square kilometers (13,176 square miles), and the POPULATION in 1917 was 1,287,722 inhabitants, or a density of 37 persons per square kilometer. During the year referred to there were 3,699 marriages, 49,963 births, and 34,008 deaths, or an excess of births over deaths of 15,952.—In 1917 there were 330 kilometers of RAILWAYS in operation in the Republic. Among these may be mentioned the Salvador Railway and the International Railways of Central America, the former running from the city of San Salvador to the port of Acajutla, with a branch line to Santa Ana, and the latter from La Union toward the Guatemalan frontier, where it is planned to meet the railways operating in Guatemala, the connections continuing through that Republic to Mexico, and through Mexico to the United States and Canada.—The exports of COFFEE from San Salvador in 1917 aggregated 36,370,821 kilos, valued at 20,995,920 pesos, silver (silver peso = \$0.7234).—Recently a representative of the Chinese American Co., of the State of Washington, with offices at Seattle, visited Central America for the purpose of reporting upon and preparing for the inauguration of a STEAMSHIP SERVICE in the near future between China and Central and South American Pacific ports.

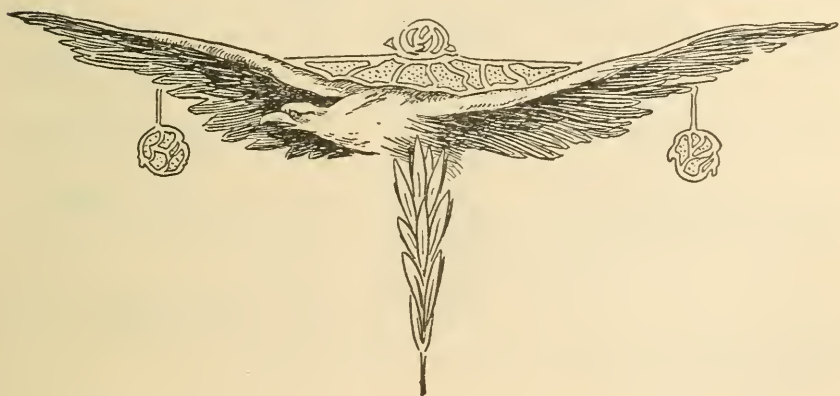
URUGUAY.

The last official census of the Republic of Uruguay, taken in 1908, showed a population of 1,042,686 inhabitants. A recent estimate of the PRESENT POPULATION of the country is 1,400,000. The

vital statistics of Uruguay for 1917, as compared with 1916, indicate a marked improvement in health conditions in favor of the former year. In 1917 there were 17,348 deaths registered in the Republic, as compared with 20,338 in 1916. The births recorded in 1917 numbered 36,752 against 36,983 in 1916. In 1917, according to the official records, 61 persons over 100 years of age and 918 between the ages of 80 and 100 died.—Mr. V. B. Sudriers, the recently appointed COMMERCIAL ATTACHÉ to the legation of Uruguay in Washington, has entered upon the discharge of his duties.—Press reports are to the effect that the President of Uruguay has promulgated the law concerning DIPLOMATIC APPOINTMENTS, under the terms of which the secretaries and other important officials of legations are required to have the title of Doctor of Law, or Doctor of Diplomacy in order to be eligible to serve in diplomatic positions.

VENEZUELA.

The completion in the near future of the work now being done on the roads which run from Barquisimeto to Carora and from that city to Trujillo adds another important link to the GREAT CENTRAL HIGHWAY of Venezuela. The governor of the State of Zulia is having a macadamized road built from the San Juan de Dios Plaza in Maracaibo to the 19th of December Road which communicates with the Bella Vista and the Delicias ranches.—The American Mercantile BANK has completed the construction of its building in the city of Caracas and is now using it for business purposes.—The Argentine Cruiser *Pueyrredon* recently touched at the port of La Guaira on a VOYAGE OF INSTRUCTION to the American countries with 20 Argentine Naval Academy students. A visit was made to Caracas, where all connected with the voyage were enthusiastically welcomed by the authorities and people of the national capital.



SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED UP TO JANUARY 25, 1919.

Subject.	Date.	Author.
ARGENTINA.		
Increasing Japanese trade with Argentina.....	1918. Oct. 31	W. Henry Robertson, consul general at Buenos Aires.
Agricultural statistics for 1916 and 1917 (pamphlet).....	Nov. 5	Do.
Promotion of industry in Jujuy, Argentina.....	Nov. 7	Wilbert L. Bonney, consul at Rosario.
Market for traveling luggage, suit cases, trunks, etc.....	Nov. 13	W. Henry Robertson.
Demand and market for American liquors.....	do.	Do.
Importation of cheese, 1911-1917.....	Nov. 16	Do.
Climate and leading industries of the Rosario consular district.....	Dec. —	Wilbert L. Bonney.
BRAZIL.		
Catalogues wanted for horticulture and for thoroughbred cattle.....	Oct. 25	A. T. Haeberle, consul at Pernambuco.
Possible market for small soda fountains.....	do.	Do.
New Anglo-Brazilian commercial company to operate in Brazil.....	Nov. 14	Richard P. Momsen, vice consul at Rio de Janeiro.
New Commercial Journal, called "A Gazeta da Bolsa" (bulletin of the stock exchange).....	Nov. 21	Do.
Activity of the State of Espirito Santo during the past year.....	Nov. 29	Do.
Awards on bids made for the erection of caustic-soda factories.....	Dec. 1	Do.
New Brazilian meat company authorized to operate.....	Dec. 2	Do.
Customs authorities of Rio de Janeiro inaugurate new regulations concerning entry of baggage.....	Dec. 3	Do.
Japanese development company authorized to operate in Brazil.....	Dec. 14	Do.
CHILE.		
Establishment of branch house of the American firm of Gaston, Williams & Wigmore (Ltd.) at Antofagasta.....	Nov. 20	Arnold A. McKay, consul at Antofagasta.
COLOMBIA.		
Sugar statistics for the years 1915, 1916, 1917, and 3 months of 1918.....	Nov. 26	A. J. Lespinasse, consul at Cartagena.
Oil companies operating in Colombia.....	1919. Jan. 2	Claude E. Guyant, consul at Barranquilla.
COSTA RICA.		
Export duties on coffee and other articles.....	1918. Dec. 11	Benjamin F. Chase, consul at San Jose.
No comparative movement in Costa Rica.....	Dec. 24	Do.
Exports of hides and skins for 1917 and 1918.....	1919. Jan. 6	Do.
CUBA.		
Market for toys in consular district.....	1918. Dec. 26	John S. Calvert, consul at Nuevitas.
American lumber and timber for Cardenas.....	Dec. 27	George A. Makinson, consular assistant at Cardenas.
DOMINICAN REPUBLIC.		
Construction of docks in San Pedro de Macoris.....	Dec. 10	Clement S. Edwards, consul at Santo Domingo City.
ECUADOR.		
Changes in Ecuadorian tariff.....	Dec. 21	Frederic W. Goding, consul general at Guayaquil.
Agricultural education in Ecuador.....	do.	Do.
Supplement to Annual Report for the year 1917.....	do.	Do.
HONDURAS.		
Telephone lines in district.....	Dec. 13	John R. Bradley, consul at Puerto Cortes.
Regarding opportunities for mail-order business between the United States and Honduras.....	1919. Jan. 2	Do.

Reports Received up to January 25, 1919—Continued.

Subject.	Date.	Author.
MEXICO.		
Oil industry in Yucatan	1918, Dec. 18	C. Gaylard Marsh, consul at Progreso.
Models of agricultural implements wanted	do.....	Edward A. Rowe, consul at Ciudad Juarez.
Market for hay presses	Dec. 19	John R. Silliman, consul at Guadalajara.
PANAMA.		
Climate of Panama	Dec. 14	Alban G. Snyder, consul at Panama City.
Match industry in Panama and imports for 1915, 1916, and 1917 ..	Dec. 17	Do.
Slaughtering of cattle, etc., in Panama	Dec. 23	Do.
Regarding the supply of manganese ore	Dec. 27	Julius D. Dreher, consul at Colon.
PARAGUAY.		
Market for tea in Paraguay	Nov. 21	Henry H. Balch, consul at Asuncion.
URUGUAY.		
Uruguayan shoe industry	Oct. 16	William Dawson, consul at Montevideo.
First South American Rotary Club at Montevideo	Oct. 17	Do.
Excellent wool clip in Uruguay	Oct. 19	Do.
Compañia Swift de Montevideo further increase capital	do.....	Do.
VENEZUELA.		
Commerce and industries for the year 1917	Nov. 13	Frank Anderson Henry, consul at Puerto Cabello.
Capital sought for agricultural enterprise	Dec. 18	Homer Brett, consul at La Guaira.



BOOK NOTES

[Publications received in the Columbus Memorial Library during December, 1918.]

ARGENTINE REPUBLIC.

- Compendio de historia Argentina. Por el R. P. Vicente Gambón . . . Segunda edición. Buenos Aires, Angel Estrada y Cía., Editores, 1914. 225 p. 8°.
- Conocimiento y creencia. Por Manuel Núñez Regueiro. Rosario, Comp. Gral de Artes Gráficas, 1918. front. port. 332 (3) p. 8°.
- El elector Sud-Americano. Nuevo curso gradual de lecturas. Compilado para uso de las escuelas primarias. Por Rafael Fraguero. Libros 1-3. Buenos Aires, Angel Estrada y Cía. 8°. 3 v.
- Guía telefónica de la red general. Noviembre, 1918. Buenos Aires, United River Plate Telephone Co. Ltd. 352 p. 4°.
- Idioma castellano. Prosa selecta. Colección de trozos escogidos de autores nacionales y extranjeros, precedida de un tratado sobre el arte de la lectura y acompañada de biografías, vocabularios, ejemplos clásicos y un catálogo de palabras castellanas cuya acepción cambia el vulgo en la república Argentina. Por Enrique García Velloso. Primer año de estudios. Undécima edición. Buenos Aires, Angel Estrada y Cía., Editores, [1905]. 374 p. 8°.
- Same. Segundo año de estudios. Octava edición. 342 p. 8°.
- Same. Tercer año de estudios. Quinta edición. 339 p. 8°.
- Nociones de instrucción cívica nacional. Por Gregorio Uriarte. Undécima edición. Buenos Aires, Angel Estrada y Cía. 84 p. 8°.
- La raza como ideal. Conferencia dada en el Rosario de Santa Fe en el día de la raza. Por Rodolfo Rivarola. Buenos Aires. Imp. de José Tragant, 1918. 49 p. 8°.
- Regulación de los motores térmicos. [Por] Eduardo Latzina. Publicado en la revista del centro estudiantes de ingeniería no. 195. Buenos Aires. Centro Estudiantes de Ingeniería, 1918. illus. 42 p. 8°.
- Las ruinas prehispánicas de El Alfarcito (Departamento de Tilcara, provincia de Jujuy). Por Salvador Debenedetti. Buenos Aires, Imprenta y casa editora "Coni," 1918. illus. 34 p. 8°.
- Trabajos sociales. [Por] Adolfo S. Carranza. Buenos Aires, Talleres gráficos Argentinos L. J. Rosso y Cía., 1918. 287 p. 8°.

BOLIVIA.

- Los Chipayas de Carangas. Por el Prof. Ing. Arturo Posnansky, F. R. A. I. Segunda edición corregida y aumentada. La Paz, Escuela tipográfica Salesiana, 1918. fold. table. pls. illus. 20 p. 8°.
- Comercio especial de Bolivia. Exportación—Importación—Bancos—1917. Dirección general de aduanas. La Paz, Imp. y Lit. Boliviana, 1918. diagr. fold. table. 556, vii p. 4°.

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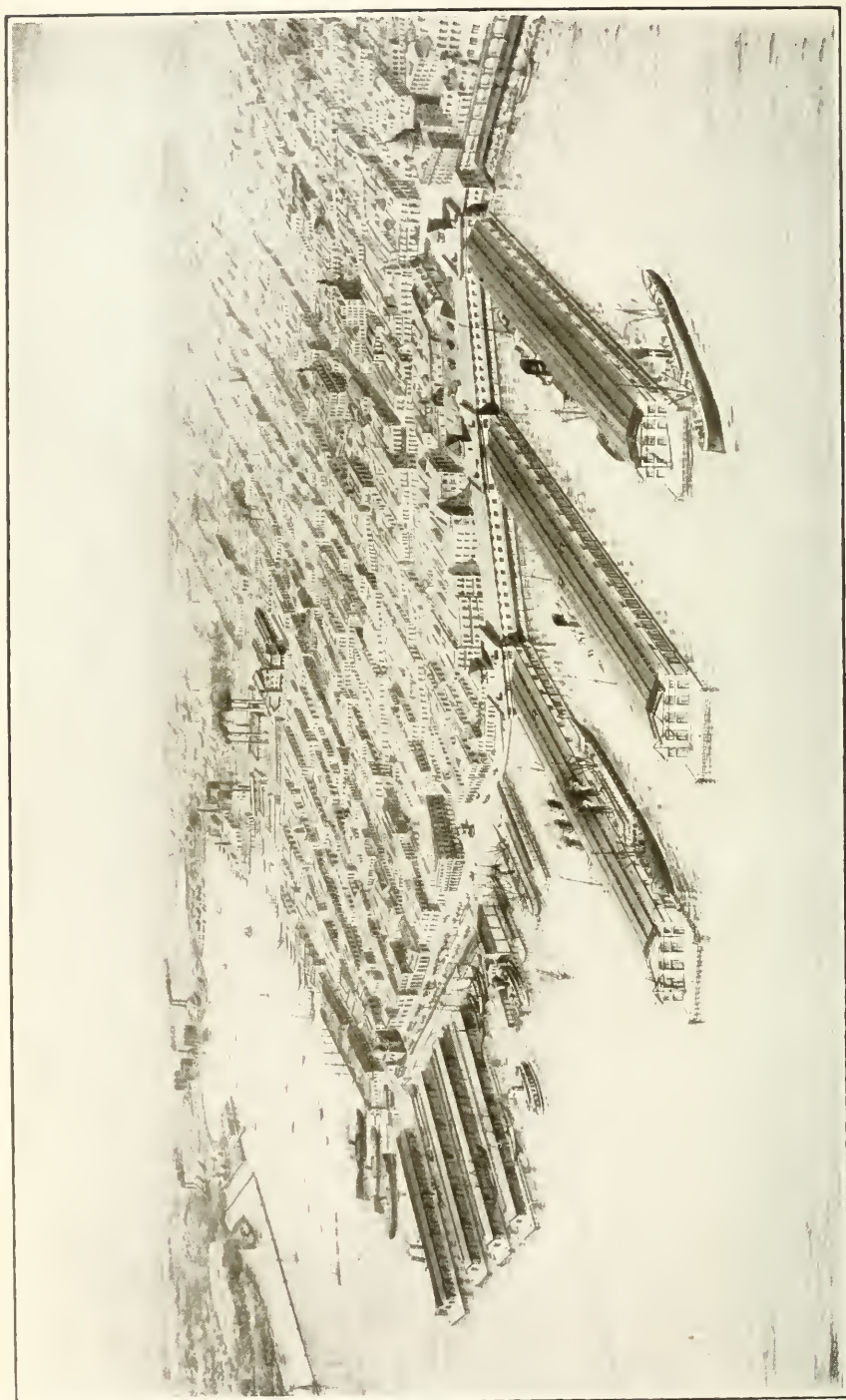
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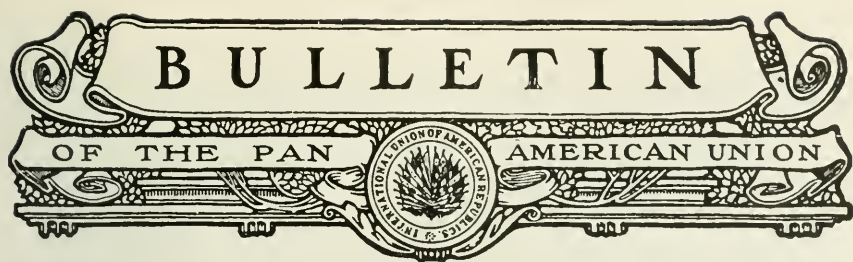
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HARBOR AND PIERS, HABANA, CUBA.

A few years ago all ships coming to Habana were forced to unload cargoes into lighters, a tedious and unsatisfactory method; to-day these docks offer the most modern mechanical loading and unloading facilities. Through this port the majority of Cuba's products going to the outside world are shipped.



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No. 2

PANAMA--PAST, PRESENT, AND FUTURE¹

PANAMA is the land of paradoxes. One of the oldest white settlements in America, it is the youngest nation; having the oldest transcontinental highway in the hemisphere, it has fewer than 100 miles of good roads in the whole of its 30,000 square miles of territory. It possesses the oldest gold mine in America, which was a century ago one of the most important in the world; it now exports practically no precious metals. Probably the first oranges in America were planted at Nombre de Dios or Porto Bello, but most of her fruit is now imported from California and Florida. Possessing the most advantageous strategic commercial situation of any country south of the Rio Grande, it has few manufacturing establishments and a comparatively small development of agricultural industry.

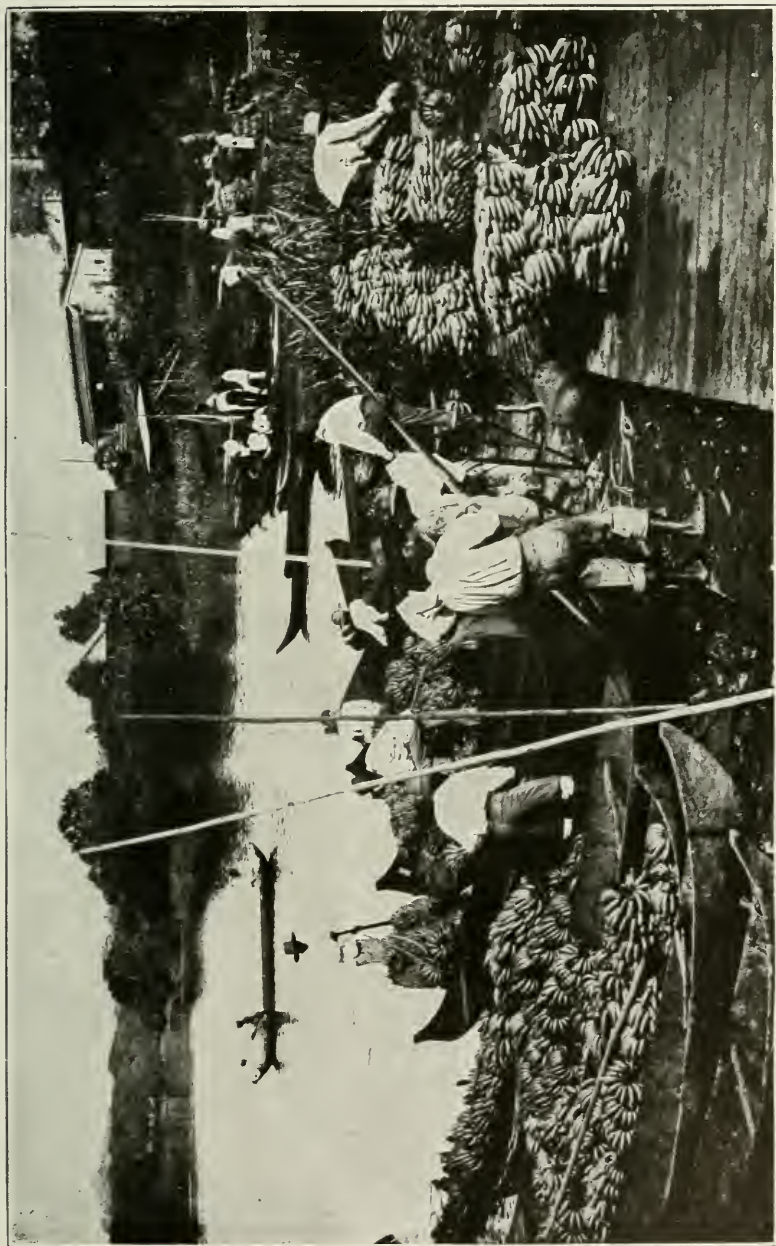
The causes for this state of affairs lie deep in the general history of America, and could well form the subject of a voluminous treatise. Although Panama's geographical situation will undoubtedly ultimately prove to be of enormous value to her commercial and industrial development, that situation has been, until the construction of the canal, one of the reasons for her relative backwardness. Explorers and travelers, with the El Dorados of continental South America and of California in their minds, treated Panama as simply an impediment in the way of their sea voyages. The earliest established business on the Isthmus was that of transporting goods and passengers from one sea to the other, and this business was sufficient to support the population which sprang up on the transcontinental

¹ By S. P. Verner, Cristobal, Panama Canal Zone.



CITY OF PANAMA FROM ANCON HILL.

In the foreground is the reservoir. The canal administration building is shown to the left and immediately beyond is the new Panama National College.



Photograph by Underwood & Underwood.

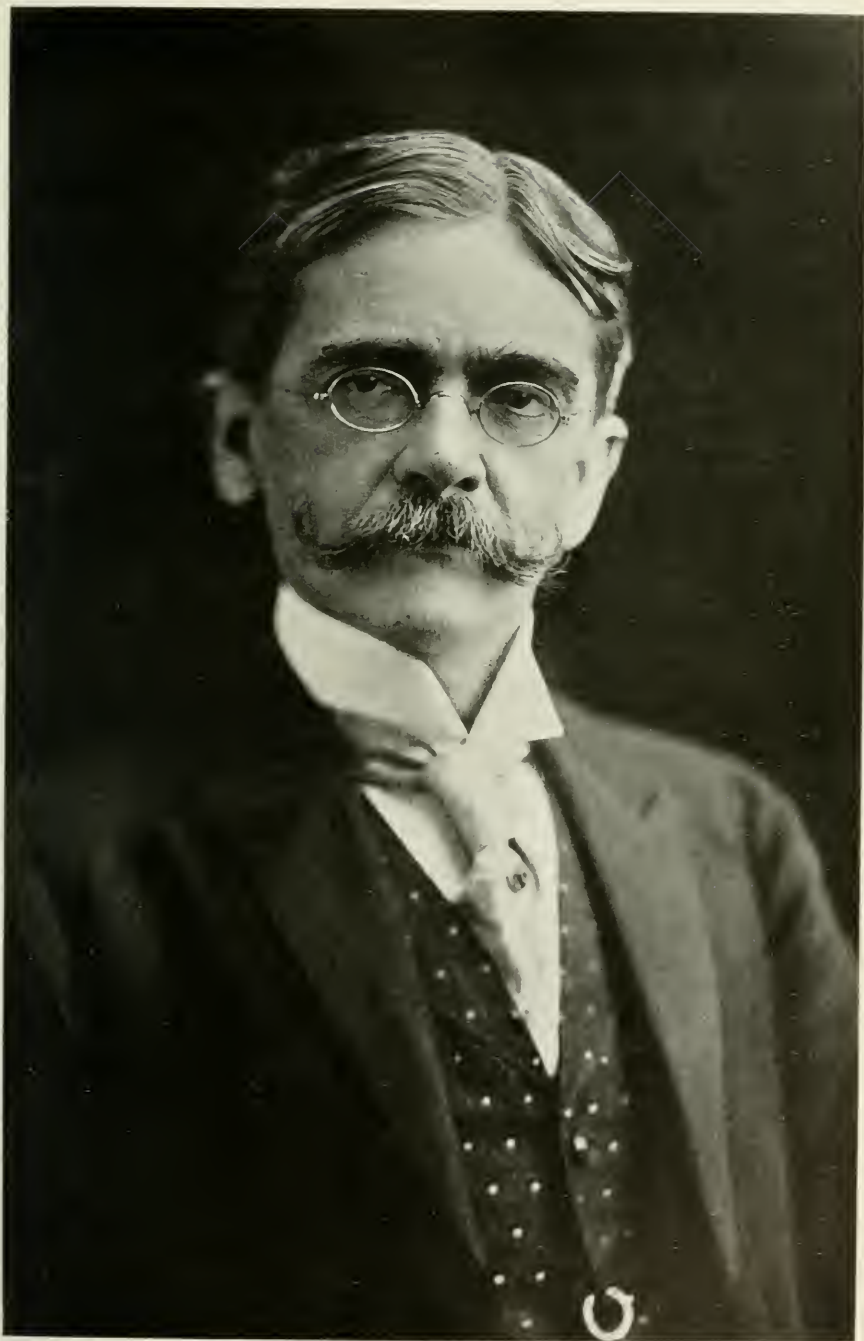
LOADING BANANAS AT PANAMA.

Bananas are loaded in canoes at Gatun, in the Canal Zone, to be afterwards shipped to the United States.

caravan road. Being able to live on this traffic, the population had no special motive to develop the resources of the interior, and such of these resources as came to life were exploited largely as a result of accident. Then the introduction of certain diseases from abroad by persons from all quarters of the globe found conditions on the Isthmus peculiarly promotive of their becoming endemic.

The consensus of expert opinion holds that malaria was introduced into the Western Hemisphere, and probably originated in Africa. The origin of yellow fever is not so thoroughly agreed upon, but when these two diseases became established on the Isthmus of Panama, the marshy character of the country at the lowest part of the mountain chain, across which the intercontinental caravan route led, made the condition highly promotive of the development of vast numbers of malaria-carrying mosquitos. Then, also, the constant influx of nonimmune travelers across the Isthmus and of transients waiting for ships kept alive the yellow fever and prevented the development of any effectively immune population. This cause had more to do with the backwardness of Panama than all the other causes combined; and it operated on Panama with peculiar relative force, because nowhere else in America was there a small territory so constantly passed over by nonimmune fresh arrivals likely to contract these diseases and to maintain them in full force. These conditions obtained at Panama from the time that malaria was introduced along with slaves from Africa and that yellow fever made its first appearance there until the Americans began to sanitize the Isthmus in preparation for the construction of the canal. This reputation for unhealthfulness which arose entirely from the local conditions immediately along the Chagres River and the Panama Railroad unfortunately was confused in the public mind with conditions throughout the whole of the interior of the Republic, so that the whole of Panama was regarded as almost the white man's grave. It was extremely difficult to combat this reputation, which even remains in the general world idea of Panama to-day, in spite of the tremendous work of sanitation on the canal, and the fact that at present Panama is healthier than any other tropical American country.

Besides these two causes operating against the development of Panama in the past, there are many and complex events in her political history; her exposure to pirates and buccaneers from both oceans; the checkered career of the stormy relations with Spain, and later with her sister provinces; the fact that she was the victim of exploitation on the one hand and of neglect on the other, and that capital was loath to invest in a country where a long-exposed coast line rendered it so easy for revolutionary enterprises to be carried out.



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DR. BELISARIO PORRAS, PRESIDENT OF PANAMA.



SCENES IN PANAMA CITY.

Upper picture: The Government palace and the national theater were completed in 1908 at a cost of \$600,000. The theater is subsidized by the Government and has a seating capacity of 1,600. Lower picture: The railroad station is a large, airy building of cement located in the center of the city. It has good accommodations for the comfort of passengers and the expeditious dispatch of trains and freight.

All these causes now, however, are no longer operative. Travelers passing the Isthmus now see on each side of the canal immense pastures, vast plantations, and other evidences of what the soil of Panama may do, operated by the United States Government, which is backing its faith by the investment of millions of dollars in agricultural and industrial enterprises. These travelers are addressing inquiries to everybody concerned with reference to the possibilities of Panama's interior. Already one railroad has been built, through the farsighted initiative of Dr. Porras, in the Province of Chiriqui, and a number of good roads have been begun and many more are planned. One of the strongest oil corporations in the world is making a thoroughgoing examination of the Republic and has already begun to sink wells in one locality. The splendid health enjoyed by the terminal cities of Colon and Panama and by the Canal Zone is an advertisement which speaks for itself to everyone of the immense number of passing travelers. The Rockefeller Foundation has almost eliminated hookworm from the Republic, and the influence of the example of the sanitation of the Canal Zone has been felt from Chiriqui to Darien. The days of buccaneers, pirates, revolutions, and political oppression are over.

The present population of the Republic is about 350,000—a little more than 10 per square mile. Panama City contains 70,000, Colon about 30,000, the city of David about 10,000, while there are a number of other cities and towns of between 3,000 and 8,000 population. Panama is about the size of the State of Indiana. There is little doubt that her territory could support a population of 5,000,000 with ease, since there are both natural resources for the basis of industry and a location with reference to maritime commerce that would enable a large population to be supported through manufacturing and commercial activities, besides agriculture, mining, lumber, and fisheries.

In enumerating Panama's potential assets the intangible one of topography might well be put first. The reason for this is the fact that Panama's topographical features are of immense value, since they are adapted to the development of a Caucasian population to an extent not realized by those who think of the country as entirely tropical. Fully one-third of Panamanian territory possesses a temperate climate, somewhat as that of Virginia in October. This is because so large a proportion of the country consists of mountain peaks and ranges and elevated plateaus. Contrary to the popular opinion, Panama is not a low flat country, but is really more mountainous than any other in South America, with the possible exception of Bolivia. There are a million acres at an altitude of above 5,000 feet, 2,000,000 above 3,000 feet, 3,000,000 above 2,000 feet, leaving 12,000,000 which might be called tropical. This means, in effect,

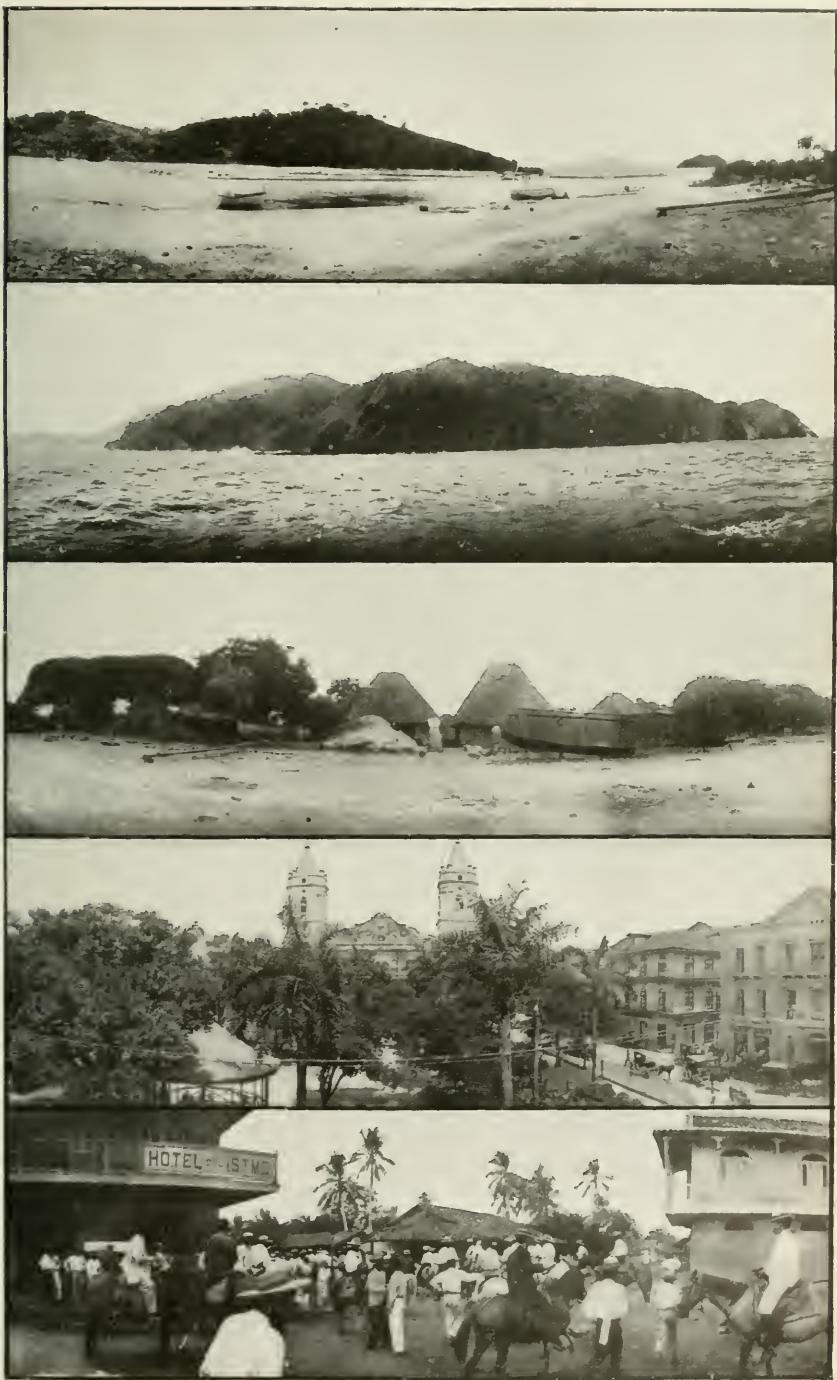


STREET SCENE IN PANAMA CITY.



THE CATHEDRAL AT PANAMA CITY.

One of the most interesting historical landmarks in the city of Panama is the old cathedral with its twin towers. It was erected in 1760.



THE PEARL FISHERIES OF PANAMA.

1. Cove in the Pearl Islands that gives shelter in case of storm. 2. Coast of the Secas Islands, where, in March, 1909, the Anguizola pearl, weighing 42 carats, was found. 3. Village of the Pearl Islands. 4. The twin towers of the old cathedral of Panama City. These towers are thickly studded with mother-of-pearl shells from the Pearl Island fisheries. 5. Street scene in David, the principal pearl market of the Province of Chiriqui.

that there are at least 3,000,000 acres available for Caucasian colonization; and if the country were so completely furnished with good roads that access to these highlands were made quick and easy a million white families might reside on these highlands, while the wage earners could go back and forth to their work in the lowlands daily, if necessary. In a broad way this general scheme for the development of Panama is the ideal at which the most intelligent and progressive public men are aiming at present.

Of the tangible resources forestry products, minerals, metals, and agricultural lands may be considered. Of the first there has long been a considerable exportation of coconuts, ivory nuts, balata, rubber, sarsaparilla, and of native hardwoods. A number of large coconut plantations are now beginning to come into bearing, besides the groves maintained by Indians and coast settlers previously. There are about 2,000 square miles of coconut land in Panama which is perhaps better adapted to that purpose than to any other. This land is capable of sustaining 100,000,000 coconut trees, whose annual produce might be estimated at 6,000,000,000 nuts, worth at normal wholesale price about \$200,000,000 per annum.

The present exportation of coconuts from Panama is about \$700,000, so it appears that less than one-half of 1 per cent of Panama's available coconut land is in actual bearing, leaving an immense field open to enterprise. It may be safely estimated that the coconut-plantation business will pay a good net profit for an indefinite period in the future, and it is practicable to raise some annual crops between the young trees until they come into bearing.

The present value of the exports of ivory nuts is about \$200,000 per annum. This is far below the quantity available from the wild palms, if the labor to gather them existed. If all the nuts could be gathered, Panama could probably yield at least 20,000 tons per annum, worth a million dollars; while if the land specially suited to ivory nuts was fully planted, the output would be 30 times that figure.

About \$2,000,000 worth of bananas were exported in the year 1917. There are 5,000,000 acres of land in Panama suited to banana culture. If fully planted, Panama's capacity for producing bananas would be about \$400,000,000 a year.

The export value of balata and rubber in 1917 was approximately \$600,000. The wild trees in Panama are capable of producing \$5,000,000 worth of these products at present if the labor were available. There are 2,000,000 acres of land in Panama well suited to the cultivation of Para rubber, and this land could produce \$250,000,000 worth of that product after the tenth year from planting.

Practically no coffee is being exported from Panama, although there is quite a large quantity produced and consumed in the Re-



STATUE OF COLUMBUS, CRISTOBAL, PANAMA.



MUNICIPAL BUILDING AT PANAMA CITY.

One of the new and attractive buildings of the city of Panama. The municipal building was completed in 1910 and occupies the site of the old cabildo (city hall), where independence from Spain was declared in 1821.

public and in the Canal Zone. There are at least 200,000 acres of good coffee land in the Republic not yet under cultivation.'

The value of the hides exported from Panama in 1917 was about \$300,000. As the animals slaughtered were all used for beef, this makes the cattle industry of Panama one of its most important. There are not fewer than 1,000,000 acres of natural pasturage in the Republic, although Panama is preeminently a forest country and not one of natural savannahs. But these natural pastures can support several hundred thousand head of cattle, while cleared lands planted in guinea grass are usually estimated as capable of supporting one head per hectare; so that there is room in Panama for a million head of cattle in addition to the above possible agricultural products.

These figures refer to the principal natural and agricultural products already regularly exported. They show that if all the available land were devoted to increasing the output of these standard products, the annual value at present prices would amount to at least \$1,000,000,000. It is to be said that these estimates leave out of consideration all swampy lands, and rocky and barren soil (of which there is comparatively little in Panama), and give the net available agricultural, horticultural, and forestry possibilities. At the same time much of these lands could be more profitably devoted to raising crops which are not now standard exports; some of these would find a market at the terminal cities and in the Canal Zone, replacing imports brought in at high expense. Others could undoubtedly be exported when ocean tonnage becomes normal again.

The largest asset in evidence in Panama is, of course, her timbers. Of these there was exported, in 1917, \$100,000 worth. There are many reasons for the failure to develop Panama's immense timber wealth, which are too complicated to be discussed at length. It may be said, however, that there is plenty of opportunity for developing the lumber industry on a paying basis in many parts of the Republic, the main desideratum being labor and supervision sufficiently intelligent and expert to include proper sanitary arrangements and adequate care for employees in their enterprises. The writer estimates the total timber resources of Panama as about 120,000,000,000 board feet, of which 40,000,000,000 would be the various valuable hardwoods, 60,000,000,000 useful soft woods, and 20,000,000,000 of miscellaneous timbers of no special utility. The total value at normal prices of this timber wealth may be estimated at \$5,200,000,000. The numerous small rivers of the country and the comparatively short distance to the sea present especially good facilities for getting out timbers, the labor problem being by far the most



ROAD CONSTRUCTION IN PANAMA.

New railroad lines, in construction and in project, together with improvements of the highways, are doing much toward making Panama a desirable field for agricultural development. Upper picture: Surveying a railroad in Panama. Lower picture: Extension of the highway from Chepo to Panama City.

important to be provided for. Of the hardwoods, the best known are Panama mahogany or caoba, nispero, guayacan, nazareno, roble, American ebony, greenheart, Santa Maria, caique, besides a number of others comparatively little known, but highly useful and handsome for many purposes. Of the soft woods there are various cedars, mangle, balsa, cuipo, and a large number of little known trees, especially wild figs, which grow to immense size.

Panama, Colon, and the Canal Zone subscribed about \$5,000,000 to the United States Liberty loans, which shows that there is capital available for a certain amount of industrial development already on the Isthmus. Many millions of dollars have been invested in the last 10 years in handsome concrete and stone buildings in Panama and Colon, and it is believed that the limit of wise investment in local real estate is almost reached now. For this reason the opening up of enterprises for the development of the resources of the interior is the next step to occupy local capital. But there is room for large investments of foreign capital also. It is believed that Panama will soon secure a loan sufficient to finance such roads and railroads as are necessary to inaugurate a new régime of industrial and agricultural activity. With this the most important need is that of labor. Emigration from the United States and Europe to the healthful highlands already referred to may be obtained by proper publicity if the means of transportation to them are provided. Labor for the lowlands is available from the overcrowded population of Porto Rico and the West Indies.

The National Assembly of Panama has been engaged in its present session in cooperation with President Porras in considering a number of reform bills intended to reorganize the fiscal system of the Republic, to improve the police and health departments, and to afford all possible governmental facilities and guaranties to the capital which is expected to be invested shortly in the Republic.

A word of warning to any who might wish to become pioneer settlers on the public domain of Panama might be appropriate here. There have been a number of both individual and of collective or cooperative settlements attempted in Panama, most of which have been failures, although there are also a considerable number of American and European settlers in some of the interior provinces who started with sufficient capital, and have done well. The failures have been due principally to four causes—lack of sufficient capital, lack of a knowledge of tropical sanitation, cooperative efforts in which the energy of the promoters had to be spent more in dealing with the petty squabbles and conflicting ideas of the colonists than in developing the land, and the lack of convenient transportation.

A young man with the genuine pioneer spirit, possessed of a strong constitution, good health, and willing to sacrifice his present comfort



PASSING THROUGH THE PANAMA CANAL.

The U. S. S. *Tennessee* passing through the Panama Canal on its return from a trip around South America in 1915 and 1916. This picture shows the *Tennessee* at lower Miraflores lock on April 27, 1916.

to his future prosperity, might do well with small capital. Such a man is comparatively rare, and anyone reading this article and being convinced of the opportunities in Panama, ought to be quite sure that he has the qualities in question before making the attempt.

There are about 4,000,000 acres of public domain in Panama available for settlement—a very conservative estimate. This land may be bought from the Government at a price, including all the necessary legal and surveying expenses, of about \$5 per acre. Not more than 1,000 hectares may be bought by one person or firm unless through a special concession from the Panama Congress. Twenty-five acres is allowed to each bona fide settler free of charge, except the expense of surveying and legal documents. Unfortunately, the Government has never followed the policy of the United States with reference to its homestead lands by surveying the public domain into quarter sections, and clearly defining the lands available, so that one of the difficulties of the settler is to find whether a given tract is open to entry or not. Plans are now under way for doing this, and it may be said that such action by the Government, together with opening up a few roads to such lands, would be of enormous value to the immediate future of the Republic.

In the opinion of the writer any prospective settler ought to be provided with capital in addition to the necessary expenses of travel to Panama, and of a reserve fund to return home in case of disappointment, of not less than \$25 for each acre that he intends to develop, this being an absolute minimum, a higher figure being preferable. In other words, if the intending settler at present in the United States should think of taking up 10 acres of public land in Panama, he ought to count upon starting with a capital of not less than \$750, and even with that he should seek the advice of experienced men in Panama, Colon, or the Canal Zone before actually embarking upon the enterprise.

The writer, in order to make a practical test of the question, bought 25 acres of land, and with a total expense of \$750, which included the purchase price of the land, cleared and planted 10 acres, erected a small house, and in one year's time developed the land to the point where a small family could live indefinitely upon the place with no further cash investment.

There is a distinct place in Panama for one or more large corporations which might do good business in purchasing large tracts of land and putting the minimum necessary improvements on them with a view to subdividing them and selling them to settlers. These minimum improvements would consist of roads, of houses of a simple type, essential requirements of sanitation, and of a nursery and a seed warehouse, a dispensary, and a small hospital. The prospective settlers might be advised so that they could be employed in the work

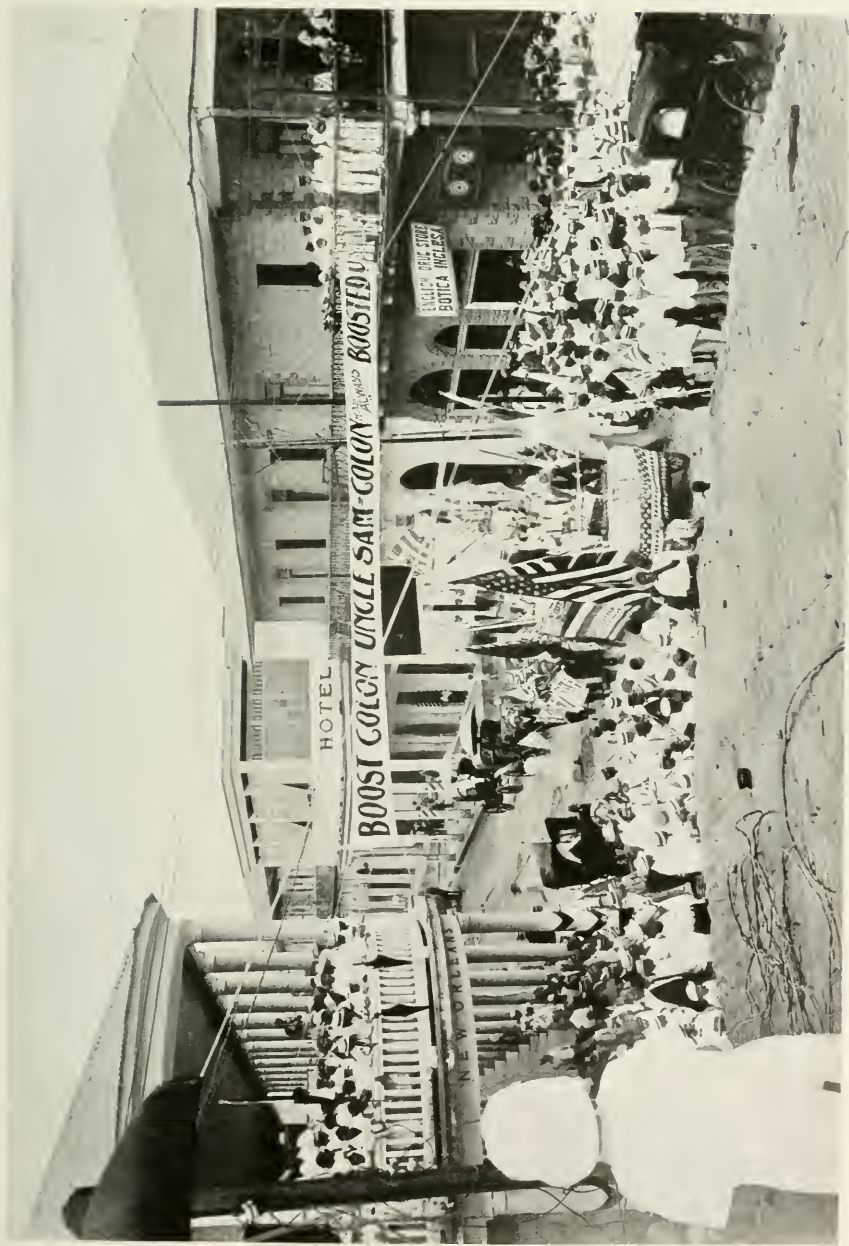


THE FALLS AT CHORRERA.

Panama, especially on the southeast coast, does not have the tropical aspect that is almost invariably associated with its name. As seen in this picture, the scenery is in places quite rugged. Such falls as this will do much toward developing the interior of Panama.

of carrying out these necessary improvements, and then be allotted farms after their employment had ceased. Such a corporation could easily make good profits, and would fill a distinct place in the future development of the Republic. It would be much easier for a company of this sort to transact all the business with the Government necessary to acquire the land, and to get the scheme into running order, and then to convey titles to the settlers, than for each small settler to go through the governmental and other requirements independently. Such a corporation might at the same time engage on its own account in some large enterprise upon a part of the land, and be able to utilize the labor of the settlers *pari passu* with their own farming operations, since all the time of the farmers would be by no means required for their personal work in case they should need to earn wages occasionally. The company could do well with sugar cane, yucca, and several other annual crops, from which profits might be derived within a year's time; while any of the several tropical products requiring from two to five years to mature could be made the basis of a permanent profitable investment; among these being cacao, avocados, citrus fruits, papayas, Para rubber, coconuts, etc.

When the Hon. W. G. McAdoo visited Panama a few years ago on the occasion of his South American tour he made an address in which he referred to the high utility of the Pan American Railway, and incidentally to the desirability of building the Panama link at an early date. At first glance it might not be thought that a country so long and narrow as Panama, fronting on both oceans and enjoying such unusual maritime transportation facilities, would particularly need a longitudinal railway system paralleling the oceans. But in fact, such a railway would be of the highest benefit to the country for two reasons—because the stormy weather prevailing along the coasts for a large part of the year has been a severe handicap to ocean transportation for 400 years, and as there are no ports in the interior large enough to justify calls by large steamers, these interior ports must be supplied from small steamers, launches, and schooners, and hardly a week passes without the loss of one of these vessels. On the other hand, the railway would afford the best means of opening up the high and healthy mountainous uplands. Such a railway system would also bring into early development the large mineral wealth of the Republic, which is still almost wholly untouched, although known to be rich; it would afford a means of getting out the immense quantity of hardwoods and other forestry products; it would also be of very high strategic military value in connection with the maintenance and defense of the canal, and its construction could be easily financed by an arrangement with the Panamanian Government for a bonus of land which could be sold as



LIBERTY LOAN PARADE IN COLON, PANAMA.

A Liberty loan parade in Panama has aroused just as much enthusiasm as one in the United States. Panama has subscribed several millions of dollars for Liberty bonds.

fast as the railway opened up the territory. The eastern terminus of this railroad would link up the rich platinum, gold, and oil region of the upper Atrato Valley in Colombia with the great center of transportation at the canal. The whole of the Panama link could be built for \$20,000,000. It is of the highest importance that, if this railway should be undertaken, the line should run close to the Continental Divide all the way, and, in fact, it should ascend to the highest plateaus wherever practicable. By starting at the elevation already reached by the Panama Railroad in crossing the Isthmus, the grade, in order to follow the line of the Divide, need never exceed 3 per cent, and in most cases 2 per cent would be sufficient. In the construction of the road the line would pass over many hundreds of small rivers. If the fills necessary to cross these rivers should be used to impound the waters, so that the lakes and ponds formed in this way would be available as reservoirs of water during the dry season, and in many cases as a source of power as well, the utility of the road to the development of the country would be immensely increased. This is a detail that should not be overlooked. It is probable that agriculture in the dry season through irrigation in Panama will be even more profitable than in the rainy season; and the heavy precipitation during the rainy season, amounting to an average of about 100 inches per annum would keep these reservoirs sufficiently supplied with water practically to supply the whole Republic during the dry season from reservoirs along the line of this railway.

Panama possesses one extremely great advantage to those who may think of settling or of investing capital there. The security afforded to life and property is practically as high as that of any State of the American Union. The steady stream of travel through the canal is advertising these advantages and others too numerous to be detailed to the whole world, and it can not be very long before the country will be on a rising tide of real and permanent prosperity.



EXPORTING TO LATIN AMERICA¹

PART I.

COMMERCIAL customs, ways, and methods of buying and selling commodities are very much the same in Latin America as they are in the United States. Almost all of the blunders made by exporters to Latin America in the handling of the trade can be traced to the mistaken idea that Latin American buyers require a different treatment from United States buyers. Add to this the parallel mistake that the Latin American market demands a peculiar character and type of manufactures, and one can account for nearly every failure in this market which is not due to downright incapacity or to chicanery.

Differences in commercial customs and ethics between Latin America and the United States are more apparent than real. With one exception, buying and selling is much the same and carried on through agencies, by instrumentalities, and in ways practically identical. What appear to be substantial differences, looming large on the surface, are really not such, but only the incidents of unfamiliar language, climate, and industrial development. An intelligent and experienced salesman, experienced in selling goods in the United States, if he be able to speak Spanish and Portuguese, finds he has little to learn or little to unlearn when he comes to sell goods in the Latin American markets.

FINANCING THE TRADE—LONG CREDITS.

There is one important difference in commercial customs to which in the beginning it may be well to call attention and that is the application of "long credits," something about which there is more than ordinary misapprehension. We are told that Latin American buyers demand 4, 6, and even 12 months' credit, otherwise purchases will not be made; that unless the United States be prepared to do business on this basis it can not expect to secure any considerable part of the Latin American trade. A superficial examination of the facts would have disclosed that there was something at fault in the argument. The chief stumbling block was that the United States had secured a large part of the trade, more than 50 per cent greater than Germany, and in 1913, the year before the war, even passed England which for a century had been the leader. This is not to take into account the almost complete monopoly of the trade during the war which may be ascribed to unusual conditions.

¹ By William C. Wells, of Pan American Union staff.

What were the facts about long credits before the war? Primarily the matter was simply a question of interest on capital requirements. Money was worth on good commercial security from 8 to 12 per cent in Buenos Aires, for example, and from 4 to 7 per cent in London, Hamburg, or Paris. Of course this fact was as well known in the United States as in Europe, and likewise that money was worth less in New York or Boston than in Latin America. What was lost sight of was the radical difference in banking customs between New York and Buenos Aires, and the radical similarity between London or Hamburg and Buenos Aires, which made it easy to market commercial bills of exchange drawn on Buenos Aires in Europe and practically impossible to market like bills in the United States. This was not so much due to the fact that the Buenos Aires acceptor of the bill had a credit standing in Europe and none in the United States, as that no one had any worth while standing in the latter country on this kind of paper. There was in the United States no market worth considering for any commercial bills, foreign or domestic. Commerce was not financed through any such agency. The American manufacturer, exporter, or other business man when he needed funds was accustomed to secure the same on personal note with indorser, on collateral, on mortgage, or by increasing his capital investment. In other words, as his business increased, he found it necessary to reinvest his profits, take in additional partners; in the case of a corporation to sell additional stock, which is the same thing; or to have resort to direct borrowings until his capital caught up with his business. In the latter case it was often that the better the business the less apt it was to catch up, so that it was no unusual thing for the best growing and most profitable businesses to find themselves seriously embarrassed by "over extension."

The English or German business man had open to him the same sources for direct borrowing or for capital enlargement; but he had, in addition, what the American had not, an indirect but extremely liquid financial resource which ordinarily made it unnecessary for him to resort to direct borrowing. This was through the sale of his customer's acceptances, for which there was a broad market among the investing public. There was almost no such market in the United States, or what little there was was in the banks themselves. This in effect reduced—since it was the bank's funds which took care of the transaction—a bill of exchange to a promissory note; the indirect to the direct. So far as the bank was concerned the drawer of the bill was treated as the prime obligor from whom collateral security might be expected. To the uninitiated and to many bankers accustomed to look at commercial transactions and investments from the domestic standpoint this may all appear somewhat inconsequential. But it was not so. The commercial bill of exchange was the facile

instrument of commerce in Latin America of the Englishman, the German, and the Frenchman, and it was the chief stumbling block of the American. It would have been a greater obstacle had it not been for the fact that some American exporters learned to avail themselves of European and native banks located in Latin America, and so were able to conform to customary methods.

From this explanation it is easy to see the bearing of "long credits" in Latin America and to understand that what was a bug-bear to the American was not such to the European. Long credits did not mean to the latter any increase in capital investment or any additional borrowings in order to carry them, but they meant exactly that to the American. Hence the difference. In illustration let us follow such a transaction through: A, a salesman for an American leather exporting house, sells \$1,000 worth of goods to X, in Santiago, Chile; B, a rival salesman for an English (or German or French) house, sells a like bill of goods to Y at the same place. X and Y, both solvent and enjoying A1 credit, elect, because funds command better interest in Santiago than in England or the United States, to purchase on four months' time. Bills of exchange are drawn by A and B in the name of their principals on X and Y, respectively, at four months' 6 per cent interest. These bills are accepted by X and Y. B deposits his bill in the Santiago branch of a British bank, or in a Chilean bank acting as correspondent for a London bank, to the credit of his principal. The bank does not lend any money. It acts merely as an agency for bringing the accepted bill to the British investing public. The real loan is made by the short-term investor in England who purchases the bill before maturity. This may be an individual, insurance company, railroad or other corporation, a provincial bank—in fact, anyone having funds for a quick turnover. The investor is secured by the indorsement of the big London bank, which in turn is secured by its correspondent bank in Chile, by the drawer of the bill, and last by the acceptor, the prime obligor. Some of the links in the chain may be omitted. B may send his accepted bill direct to his principal in England, who will negotiate its sale through the London bank, through his local provincial bank, or, in the case of large concerns, may find a market without recourse to bank agency. The principal, the exporter, in case he has idle funds, may even hold the bill himself. The beauty of the system is its elasticity, permitting the free use of capital whenever needed and responsive to every commercial need.

Such was the channel open to B, the Englishman. What had A, the American? Well, he might tie himself on to the English chain and sell his bill in London, as some did, but there were disadvantages connected with this, and it was only open to a few. Ordinarily, he forwarded the bill to his principal in the United States. When this

principal presented the bill to his own bank, he was told that the bank could not sell the bill for him; that there was no market for such paper in the United States; that if he needed money, the bank would lend it to him in the customary way; but that the foreign bill, so far as the bank was concerned, was the same as a promissory note made by a dummy maker; that its whole banking status rested upon the indorsement of the drawer. In other words, in the form presented, it was unsecured paper.

The European banking custom was elastic, but it was also safe. Let us return to the original transaction in Chile. Credit information in Chile is much more accurate, because the facts are much more easily ascertained than in the United States or even in England. B, the Englishman, who sold \$1,000 worth of goods to Y on four months' time, was not acting upon his own judgment alone, but in concert with the Santiago bank, which in effect had told him before the transaction was completed, "You can safely sell Y goods to such and such an amount on such and such time, and we will back his acceptances for transmittal on your account to London." If Y's credit was truly A1, the Santiago bank required nothing further of him, but if it was not such, then Y was required to supplement his credit as the circumstances might demand. In any event, the bills of lading and other papers would pass through the bank.

In effect, Latin American "long credits" were not what the inexperienced American business man believed them to be, for they were not a burden upon capital investment as they appeared.

What has been said above is predicated upon the assumption that the credit of the acceptor of the bill was above suspicion—something easily to be determined at the residence of the acceptor through the agencies who themselves would in the ordinary course of business handle the accepted bill. If the credit of the acceptor was not good, then the drawer, if he chose to go through with the transaction and sell the goods, would himself take the whole responsibility. Germans apparently made a specialty of handling shaky credits in South America, and most English, French, Italian, and Spanish exporters were content to leave such business in German hands. It was a gamble in which when it lost somebody had to pay the price, and legitimate German trade, as the Germans themselves were beginning to understand, did pay the price. Let us return to our illustration: The Latin American merchant who bought the goods on four months' time had in mind doing exactly what the seller, British or American, at the other end of the line, was trying to do—that is, to do as much business as possible upon a given amount of capital and to avoid direct borrowings. Money was worth more in Santiago than in London and New York, therefore he made indirect borrowings in London rather than direct borrowings in Santiago. It was all

a question of money's worth. When, as sometimes occurred, the interest margin warranted he paid cash against documents. Again (and this is important to be remembered, for it accounts for much American trade), he paid cash whenever the American exporter was able to offer him goods at price or quality better than the English or German goods in a degree sufficient to take up the difference in money's worth between London or Hamburg on one side and Santiago on the other, assuming in this case that the American exporter could not handle accepted bills and demanded cash. This last was in many ways the most interesting side of the Latin American situation. A very large volume of trade from the United States was due to the single fact that American goods and prices were so much superior to English and German goods that the buyer found it to his interest to finance the transaction in American goods at local rates for money rather than to buy English or German goods and finance the transaction at London or Hamburg money rates.

One understands that ability to compete in qualities and prices is the very foundation stone of all trade, but the instances are numerous where the margin being slight some secondary advantage or disadvantage might win or may lose the trade. However, one must not allow his mind to be confused into a belief that the secondary and the occasional is the primary and the constant. "Long credits" were secondary and more or less occasional. They did not create much worth while trade but they acted as a lubricant to all trade. Understanding, then, the true relation of long credits to Latin American trade we can see the falsity of the position of those who maintained that the United States could not do business in Latin America unless it resorted to a long-credit system, and we can understand what was a paradox to many that the United States did do the business without such credits. But it lost, or rather it failed to acquire, some trade, perhaps not much, but clearly some, because its banking customs did not fit in with Latin American banking customs. In this general connection it is perhaps worth observing that there was an additional reason why long credits had not the preponderating influence which some imagined, which is that the margin between money's worth in the United States and in Latin America was not as great as between England and Latin America. Since it was this margin that accounted for long credits it can be readily seen that where the margin was less the narrower the market for the acceptances, supposing that there were such a market or that one could be created. The acceptor, as we have shown, was borrowing money in a market where money was cheap. There would be no ultimate advantage for him to go to a market where, comparatively speaking, money was not cheap. The economic status of the country and not the use or nonuse of the bill



Courtesy of Bureau of Plant Industry, U. S. Department of Agriculture.

A FIELD OF MANTOC IN BRAZIL.

Among the food plants grown in Brazil, manioc offers not only an excellent bread from a nutritive point of view, but also a great number of derivative food elements, such as starch, tapioca, and the dextrin of general domestic and industrial use. Manioc is successfully cultivated within 30° latitude on both sides of the Tropics and at a temperature of from 26 to 28° C. It presents a great variety, differentiated by the color of the branches, of the leaf stock, the flowers and roots, the most widely cultivated being the maniot nipim and the manioc uilissima. Manioc produces about one-quarter of its weight in flour and contains almost 36 per cent of starch. In 1917 Brazil exported 18,488,436 kilograms, valued at \$1,300,000, to England, Uruguay, Argentina, France, Portugal, Bolivia, Italy, and the Cape Verde Islands. Brazil's production is calculated at 500,000,000 kilograms, the greater share of which is grown for domestic consumption.

of exchange made the difference between money rates in London and in New York.

There is another aspect of the long-credit case which should be touched upon and that is its sentimental side.

The writer does not believe that national or individual sentiment plays much of a part in international trade. One can show that it does not almost with the certainty of a mathematical demonstration. Sentiment may account for the enactment of tariff or other laws which do obstruct or do facilitate trade, but sentiment itself, unless crystallized into law, has little or no bearing on trade. Nevertheless, it has a bearing upon other things which may be of even more importance than trade. The sentiment about long credits and the failure of United States traders to extend the same has been and is yet used in Latin America to the disadvantage of the United States. The case is presented as one where the Yankee is casting a slur on the business integrity of the Latin American. The Latin American importer may understand the real facts, but he no more represents Latin American public opinion than does the New York exporter represent United States public opinion. He is only one among many. His influence on legislation and on public opinion is much less than the influence of the American exporter. This is due in part to different social customs but more to the fact that he is oftener an unnaturalized foreigner and less identified with the sentiments and feelings of his neighbors than is the United States exporter. It is quite possible, however, that a particular Latin American importer may not understand the true significance of the fact that the German or Englishman offers him credit and the American does not. It may be that he, as well as the newspaper editor and the legislator, resents what appears to be a slight on Latin American integrity, for such it has been represented to be by rival interests. Strength has been added to this absurd but notwithstanding important charge by well intentioned but inept writers in the United States who are not well versed in international trade although in a sense familiar with Latin America otherwise. To such the long credit case was one where the American exporter did not care to take a chance or where he did not take the pains to ascertain the extent of the risk, in other words, the credit standing of his customer. In effect such a one admits the German charge that he, the German, extends credit because he trusts his customer and the American does not because he does not trust him. These well-intentioned but unfounded explanations of the credit situation have been given much publicity in Latin America as admissions of the charge, which in truth they are, only they are made by persons incompetent to make admissions. They belong to the class of confessions, well known to criminal investigators, made by persons in reality innocent of the crime.

THE CULTURE AND INDUSTRY OF MANIOC¹

WITH the exception of corn, beans, and potatoes, manioc is, of all the indigenous plants of America, the one whose culture is the most widespread in all parts of the world which afford possibilities for its cultivation. This wonderful Brazilian plant, whose original habitat is the valley of the Lower Amazon, was carried by the Portuguese navigators of the fifteenth century to every part of the world, and even at this time the vestiges of its culture are met with at many points visited by them.

Von den Stein found manioc cultivated in northern Brazil among the Bacairi savages, who had never seen white men, and were still living in the polished stone age at the head of the Xingu River. The native habitat of manioc lies, therefore, in Brazil, but the cultivation of it dates back no further than the sixteenth century. In 1796 manioc farina was being exported to Portugal, as is seen from a letter of August 16 of that year, written by Fernão Noronha, governor of the Captaincy of Maranhão, in which he states that he is commanded by his Government to foster as much as possible the culture of wood flour and encourage the shipping of it to the mother country.

Peckolt says, however, that at the time of the discovery the Portuguese found manioc in cultivation among the Guaranys and Tupinambás, and goes on to show that Brazil, being the original home of the plant, the only way to explain the existence of manioc in Africa is to suppose that it was swept across the ocean in the current of the Gulf Stream—an hypothesis which we can not but reject at the offset, being thoroughly convinced that if manioc was found in Africa it was because it was carried there by man. Notwithstanding this view regarding manioc, this same author very reasonably states that if it were not for the writings of our time people of 200 or 300 years hence who might discover forests of chinchona trees in the Himalayan heights of India would never believe that seedlings of this medicinal plant had been selected in Peru and Bolivia and transported, amid all sorts of dangers and difficulties, to those regions. The fetichistic religion of the aborigines of Brazil, enriched with fabulous legends, naturally led them to attribute to sweet and bitter manioc a supernatural origin, and

¹ This article is translated from a very interesting paper written by Señor Paschoal de Moraes, which appeared in a recent number of *Lavoura e Criação* (Farming and Cattle Raising), a magazine published in Rio de Janeiro, Brazil.

gave rise to the story that it was in the grave of the predestined mani (bread), the offspring of a virgin (og), that arose a plant with a knotty stalk whose fruits intoxicated the birds of the forest. As the shrub grew older there was a cleaving of the earth under which lay the tiny being of a year old, admired in life as a blessing to the people of the neighborhood; and when the surface of the grave was opened there was discovered a root with a bark of an earthy color which invested a pulp as white as the naked body of manioc.

The legend spread and the plant took the name of manioc. The first scientific notices that we have of manioc were furnished in the year 1548 by Pinzon, who gave it as indigenous to Brazil, thriving as far as 3° latitude south and growing at a height of 3,000 feet above the sea level.

Manioc thrives and finds its habitat extending as far as 30° latitude on both sides of the Equator. Outside of this zone it can not be cultivated with advantage. The temperature of the region should not be subject to wide variations. Some men think that manioc grows best in temperatures ranging between 79 and 82° F. at most; on this point, however, no experiments are recorded. During the first months of its evolution manioc requires a high degree of humidity, reaching to 90 per cent or more, and during the full cycle of its growth a rainfall of more than 47 inches distributed over a period of 150 days. The most suitable land is a light sandy clay, rich in humus. Preference is usually given to ground with a southern or eastern exposure. Manioc is a very exhaustive plant and does not grow more than three or four crops with profitable results on the same ground without the use of fertilizers. Besides rotating with peanuts, beans, cowpeas, and other leguminous plants, it is necessary to practice a rational system of fertilizing, the final stage of which should be a layer of well-cured cowpen manure, or else the following preparation, the quantities given being required for 1 hectare: 88 to 220 pounds of sulphate of potash, 220 to 1,100 pounds of superphosphate, 110 to 106 pounds of sulphate of ammonia.

The planting must be done on the same day on which the manioc is cut and at the time when leaves of the shrub are ripe, which occurs from July to September. It is well to avoid planting on a rainy day. The stalk should be cut in medium-sized pieces, care being taken to select those pieces which are quite milky, the ends being rejected. The planting is done generally in drills of medium depth and about 2 feet apart. When the plants have budded and the first harrowing is being done, the farmer takes care to remove all the buds but one. Manioc ripens usually in from 8 to 18 months, the length of time depending on whether the variety is an early or a late one. Some farmers judge the ripening of the roots by the fall of the ripe seeds.

It would be an interesting observation to watch the culture of manioc with a view to discover whether, by a careful selection of the seed and appropriate methods of culture, it might not be possible to create a new variety characterized by its richness in starch, an experiment which we believe has never yet been made.

The usual method of reproduction by planting the cuttings results in a constant repetition of the same variety with all its characteristics. Like a great many other food plants, manioc presents a limited number of varieties, which differ among themselves with regard to the color of the stalks, branches, stems, flowers, and roots. According to Peckolt, it can be divided in a general way in the following varieties: First, the varieties with green or whitish stalk and stem, descended from the *Manihot Aipim* (Pohl); second, the varieties with purple or red stems, descended from the *Manihot utilissima* (Pohl). There are other varieties which constitute a form of both and for which it is difficult to find a proper classification as intermediaries.

Manioc, this marvelous plant of the Tropics, might be made one of the most valuable assets of Brazil if it were grown on a large scale and utilized intelligently in the different industries of its products. These are dry manioc, farina, starch, tapioca, alcohol, tiquira (manioc brandy), dextrin, powdered meal and manioc farina, cassava cake, artificial barley and sagú, and many other useful and tasty preparations.

Not many farmers in this wonderful country of which manioc is a native can estimate the great importance of this plant, which is a valuable substitute for wheat and susceptible of extensive industrial applications.

Manioc was taken from Brazil to Florida, in the United States of America, less than 20 years ago (in 1898). It has done well in its new abode. There are now a number of factories in that State, the largest of which have an output of from 600 to 1,000 tons of starch per crop.

Farmers' Bulletin No. 167 of the United States Department of Agriculture contains a study of the culture of manioc by Mr. Tracy, who devotes considerable attention to the importance of this plant and its industries. The possibilities of this culture in North America are limited to Florida and Louisiana in the United States and to the Republic of Mexico. The culture in Florida, which lies between $25^{\circ} 6'$ and 31° latitude north, has already attained considerable importance, and it is in that Southern State of the great northern Republic that we find the industry of manioc in its most developed stage, the extraction of the fecula being here performed by the most improved methods. In this connection, says Paul Hubert:

Florida has given an example to Brazil and proved that in those regions of North America the march of progress goes on with rapidity. To Florida we must turn if we would study thoroughly the culture and industry of manioc, for the Floridians have done with this plant what the Californians had done before with the delicious Cabula orange of Bahia, which now constitutes one of the solid assets of that State.

Experiments with manioc culture in Louisiana have not proved successful. Trials made in Mexico in the northern sections, which are adapted to yucca, have given excellent results. Yucca is cultivated throughout Central America. In South America the country in which the greatest effort has been made to adopt this culture is Argentina. The growing of manioc has developed enormously in that country and the latest statistics attribute to it an area of 9,000,000 hectares (22,500,000 acres), a large number of plantations being located in Corrientes, Formosa, Chaco, Misiones, Tucuman to the north of Santa Fe, and Entre Rios. Prof. Boto has written an important paper on manioc and Dr. Centera submitted to the faculty of Agronomy and Veterinary Science of Buenos Aires a most valuable thesis on the same subject. The culture is quite successful in Paraguay and Colombia.

Manioc is grown in all of the five parts of the world, but the regions where the culture has attained the greatest prominence are Java, Reunion, Jamaica, Madagascar, Indochina, and CochinChina. To form an idea of the brilliant future that awaits the development of manioc products, we have only to reflect that in the French Senate a few years since the eminent Senator Méline, one of the best known statesmen of the Latin race, in an eloquent speech justified the levying of an almost prohibitive duty on all manioc imported into France. Referring to the great factories for the manufacture of fecula and the products of this industry, Senator Méline declared:

The situation, gentlemen, is unfortunately compromised and endangered by the appearance of a formidable competitor, which had not been foreseen in 1892, and which is called manioc. Manioc, gentlemen, is a plant, a sort of small shrub, a native of Brazil, the culture of which is developing in all tropical countries. This shrub has the advantage of sprouting without any sort of preparation and without cultivation on otherwise worthless lands. It is sufficient to plant the root to obtain at the end of from 6 to 12 months an abundant supply of fecula. Manioc, therefore, can compete most advantageously with potatoes, the fecula content of the former being 72 per cent, while that of the latter does not average more than 16 per cent. Six hundred and eighty-five kilos of potatoes are required to make 100 kilos of fecula, while only 140 kilos of manioc are required to produce the same 100 kilos of fecula.

Senator Méline gave a vivid description of the ruin of a number of French industries in consequence of the competition of manioc.

The French Senate was so impressed with his arguments that they not only hastened to impose the new duty, but made it apply both to foreign countries and the French possessions as well. When several senators protested against the unjust treatment of the colonies,

Méline declared that it was absolutely necessary to protect the farmers of the home country against outside competition, and that it was the duty of the colonies to abstain from producing things which might compete with the productions of France. This action of the French Senate and the discussion that preceded it showed the interest excited in that country by a plant which belongs to us and which we regarded with entire indifference. Before the war our shirts and collars were starched with Remi cereal starch, while we ate rice fecula prepared by Block in France and consumed in our cotton factories immense quantities of this same fecula in the preparation of our stuffs; and this while we owned the richest root in the world and one which implants fear and amazement in the minds of patriotic and cultured nations.

There is no other plant which yields as great a production in starch as manioc. According to the distinguished Dr. A. Caire, 1 hectare ($2\frac{1}{2}$ acres) of manioc planted at a distance of 1 meter apart will contain 10,000 shrubs, yielding a minimum of 4 kilos (8.8 pounds) per shrub, or a total of 40,000 kilos (88,000 pounds). The minimum yield of manioc in farina is equal to one-fourth of the gross weight. So we have 10,000 kilos (22,000 pounds), which, being sold at 400 reis (10 cents) per kilo, will yield 4 contos de reis (\$1,000).

The return in starch is larger still. Reducing all the manioc raised on 1 hectare ($2\frac{1}{2}$ acres) to starch we have, according to an analysis of the agricultural school at Bahia, the following result, using the variety which yields the highest percentage, the São Bento. This variety yields 36 per cent of starch; consequently 40,000 kilos (88,000 pounds), the average of production of 1 hectare ($2\frac{1}{2}$ acres) will yield 14,400 kilos (31,680 pounds) of starch, which being sold at the rate of 500 reis ($12\frac{1}{2}$ cents) per kilo, will yield a liquid product of 7:200\$000 (\$1,800). Supposing there is an expense of 1:200\$000 (\$300) for cultivation and preparation, we have a profit of 6:000\$000 (\$1,500) in starch alone, besides the mass, which can be utilized to manufacture farina of a low type.

Nearly all the Brazilian States export manioc farina, which is the only manioc product that we do not import. In 1917 the seven States which exported most manioc farina were, in order of quantity, Rio Grande do Sul, Santa Catharina, Pará, Maranhão, Rio de Janeiro, São Paulo, Bahia. Other States followed with smaller quantities.

The total export of farina was 18,498,436 kilos, valued at 5,192:053\$000 (\$1,298,013). The States which imported the most tapioca were Rio de Janeiro, Maranhão, Bahia, and São Paulo. The States which imported manioc in slices were Pará, Bahia, and Maranhão.

The greatest importers in value of manioc farina were England, Uruguay, Argentina, France, Portugal, Bolivia, Italy, and Cape

Verde. The greatest importers of tapioca in value were France, England, Portugal, and Italy. France and England were the greatest importers of manioc in slices.

The value of manioc is made clearer each day in consequence of the studies and analyses which are being effected in this country and which prove it to be a substance of great commercial and industrial value by reason of its richness in starch, and a food article of great importance by reason of its nutritious and tasteful qualities.

The only element wanting in manioc is gluten, which exists in wheat in the proportion of 13.53 per cent, which renders wheat an indispensable crop and places it in the front rank in importance.

From analyses effected by the agricultural school of São Bento in 1912 on manioc brought from Valença in the south of the said State, it is seen that all the varieties are rich in fecula (starch) content, and that the São Bento contains the highest percentage—viz, 46.14 per cent—and the lowest, the *vassoura molle*, "wet broom," 21.35 per cent.

The growing of manioc extends from the Amazon Valley, its original home, to the State of Rio Grande do Sul. It is essentially a native culture and it is carried on by methods similar to those practiced with regard to other crops.

The consumption of farina is enormous, because, together with beans and jerked beef, it forms the basis of the rich and savory food of the people. It is impossible to calculate the production, which, however, is roughly estimated at 500,000,000 kilos consumed at the rate of 100 grams (about 3 ounces) per person, by 14,000,000 of native consumers.

At a minimum price of 100 reis ($2\frac{1}{2}$ cents) per liter (about 1 quart) its value will reach 50,000 contos, which is far below the truth. But after its inestimable value as a foodstuff, the greatest merit of the *mandioca utilissima* for all the human family is in its starch content, which is greater than that of potatoes and other vegetables. The intrinsic value of starch is being recognized more and more from year to year, and manioc, the type of vegetables producing this substance, will tend to become enormously popular in the future. Starch constitutes one of the essential elements of modern civilization. It can be used in many ways, and each day brings forth some new demand for it both in the arts and industries on the one hand and for the satisfaction of culinary requirements on the other. It is essential that the supply be abundant and constant.

The outlook for manioc in the world is a most auspicious one, and there is every indication that its culture should be rendered more extensive and its industry developed on an ever-increasing scale.

SHIPS FOR LATIN AMERICA

SHIPPING as every one knows played a most important part in the war. One is tempted to say that it played the chief rôle in the great drama. The military command of the sea secured by the British navy at the very outset was never relinquished or weakened in any degree up to the close. German and Austrian war vessels were forced to take refuge in their own harbors under the protection of German and Austrian land fortifications or to intern themselves in neutral ports. German and Austrian merchant ships disappeared in the same way into the same refuges. From the offensive side the British command of the sea was perfect from the first week in August, 1914, up to the close. French ships aided in maintaining the grand cordon and so later did the naval vessels of Italy, the United States, Brazil, Japan, and Greece. This was all on the offensive side, the side which paralyzed the war purposes of Germany throughout all the world except where the German armies stood.

On the defensive side there was a different story. A few German raiders remained at sea who captured and sunk a number of allied and neutral merchant ships. On one occasion they even defeated a small British squadron of war vessels off the coast of Chile. But these raiders were soon brushed aside and had nothing else remained, the allied defense, that is, the protection of its own merchant fleet in furtherance of its own war purposes, would have been as complete as was the allied offense against the German merchant and war fleets. But something did remain and that something became a serious menace. The submarine, conceived by its American inventors as a war vessel to be used against other war vessels and so adapted by England and France, was by the Germans diverted to another use, the destruction of merchant shipping. For a while there seemed almost no defense against the submarine so used. It was true that even the merchant ship, if it was armed with a 6 or 8 inch rifle, was more than a match for the submarine, but the purpose of the submarine was not to fight but to destroy without warning.

The destruction of allied and neutral shipping by German submarines began to assume dangerous proportions in 1915. During the first quarter of 1916 the submarine was destroying shipping at a rate nearly 30 per cent greater than the allied and neutral countries were building, and in the second quarter of the year the rate remained the same; in the third quarter of 1916 the percentage of destruction over building was nearly 40; in the fourth quarter it rose to 165. That is, from October 1, 1916, to January 1, 1917, German submarines destroyed nearly two and two-thirds times as much tonnage as the

allied and neutral countries built in the same period. During the first quarter of 1917 the percentage increased to 200—i. e., 3 tons were destroyed to 1 ton built. In the second quarter of 1917 the percentage was 257, notwithstanding that in that quarter and the preceding one there had been an increase in building. This was the peak, when in spite of increased production the destruction was more than three and a half times as great. For the third quarter of 1917 the percentage fell to 138, and yet the destruction was over two and a third times the building. From this point conditions rapidly changed. Building increased so that during the fourth quarter of 1917 more than twice as much tonnage was built than in the corresponding quarter of the year before. At the same time destruction, due to the better development of the allied defense, decreased to about two-thirds of what it had been at the peak, six months before. The percentage for this quarter, the fourth of 1917, was 36 more for the submarine than for the builder. In the first quarter of 1918 it was nearly 30, both destruction and construction fell off but the former more than the latter. In the second quarter of 1918 the turn was made when building passed ahead of sinking. In this quarter there was 33 per cent more tonnage built than sunk. In the third quarter of 1918 which saw the end of the war the percentage of building over destruction was 217. That is, at the close of the war, three and one-sixth times as much tonnage was built, during that quarter, than was destroyed.

At the close of the war the United States had become the chief agency in ship building and the United States merchant flag, which before the war was rarely seen in any of the world's ports outside of the United States itself, became a familiar sight wherever ships sailed, which was to all the world outside the Central European countries whose ports were still firmly locked by British, French, American, Brazilian, Italian, and Greek war vessels.

The control of shipbuilding and ship operation in the United States has been exercised through the United States Shipping Board, one of the great war agencies created after the entry of the United States into the war in April, 1917.

The Shipping Board through its Division of Operations has very kindly furnished the Pan American Union with the statement hereto attached showing the number and tonnage of ships employed in the trade between the United States and the Latin American countries since the war ended. This statement shows the condition as existing about six weeks after the war ended, that is on December 31, 1918.

At that time there were 431 steam-propelled vessels (sailing vessels not included in the statement) engaged in the trade, of which 263 were under the control of the Shipping Board and 168 operated independently by owners or charterers. The tonnage, expressed in tons,

dead-weight, of the directly controlled ships was 1,086,630 and of the independently operated ships was 558,614 tons. The writer is authorized to say that since the statement was prepared there has been a very considerable increase in ships assigned to the trade which increase will continue as may be justified. Dead-weight tonnage (D. W. T. in the table) means the actual carrying capacity of the ship down to its load line—that is, to the line of safe and convenient submergence in the water, expressed in tons of 2,240 pounds. While not exactly the commercial-carrying capacity of the ship, which is more generally expressed in cubic feet of volume by means of an artificial “registered ton,” it is a nearer approximation to actual carrying capacity than is the registered ton.

UNITED STATES SHIPPING BOARD—DIVISION OF OPERATIONS.

(As of Dec. 31, 1918.)

Amount of tonnage employed in the following trades.

Trade.	Steamers operated independently by owners or chartered owners.		Steamers assigned by the United States Shipping Board.		Total ships.	Total D. W. T.
	Ships.	D. W. T.	Ships.	D. W. T.		
South American:						
West coast (nitrate).....	44	144,523	54	254,821	98	399,344
East coast (general).....	34	176,274	49	324,777	83	501,051
West Indies and Central American:						
Fruit.....	37	72,685	15	47,456	52	120,141
General.....	34	117,534	75	255,296	109	372,830
Sugar.....	13	29,263	48	141,883	61	171,146
Ore.....	2	6,900	6	17,327	8	24,227
Sisal.....	4	11,435	16	45,070	20	56,505
	168	558,614	263	1,086,630	431	1,645,244

SUMMARY.

	Ships.	D. W. T.
Steamers operated independently by owners or chartered owners.....	168	558,614
Steamers under control of United States Shipping Board.....	263	1,086,630
	431	1,645,244

Registry of the tonnage is divided as follows:

	Ships.		Ships.
American.....	238	Miscellaneous—Continued.	
Norwegian.....	82	Russian.....	1
Danish.....	38	Nicaraguan.....	3
Dutch.....	20	Honduran.....	5
Swedish.....	14	British.....	9
Miscellaneous:		Cuban.....	2
French.....	9	Mexican.....	4
Argentine.....	2		
Greek.....	1	Total.....	431
Brazilian.....	3		

Manganese ore trade from Brazil not included. Only sailing vessels employed in this trade at present.

ROCKY MOUNTAIN NATIONAL PARK " " "

INCLOSING one of the highest mountain peaks in the United States and a picturesque area of the great Rocky Mountain Range about 360 miles square, Rocky Mountain National Park, created in 1915, is visited annually by thousands of people. The situation of the park in the State of Colorado, which in itself has more than its share of magnificent scenery, and its easy accessibility from Denver and the Middle West, as well as from the Rocky Mountain country and the Pacific coast, has made it a vacation land easily within reach of a large number of people. Long's Peak, 14,255 feet high, is the commanding feature of the park, a part of the very backbone of North America—the Continental Divide, where the waters of the descending streams find their way on one side into the Pacific Ocean and on the other into the Atlantic.

The movement for the creation of the Rocky Mountain National Park came about through the fact that Estes Park, a mountain valley in part comprising the park, had so grown in public favor that the management had become burdened with a task almost beyond their resources. Roads had been built and maintained, the streams stocked with trout, shooting prohibited, and every effort made to preserve unmarred the natural beauty of the region, but the increase of tourists and visitors was so great that the owners and summer residents of Estes Park came forward with the proposal that Estes Park, together with parts of the Medicine Bow National Forest and the Continental Divide, be put into Uncle Sam's hands and administered as a National Park. Their proposal was considered favorably, and Rocky Mountain Park came into existence as the fourteenth of the national playgrounds of the United States.

The report made on Estes Park by Robert B. Marshall, chief geographer of the United States Geological Survey, at the time the United States Government was considering the proposition of making the area a national park, states concisely the advantages of making Estes Park a national playground and also contains passages of no mean scenic discussion.

"There is no predominant outstanding natural feature in Estes Park, such as is found in the Crater Lake, the Yellowstone, or the Yosemite, or along the Grand Canyon of the Colorado. The region as a whole is as beautiful as any to be found in the United States or, indeed, in the world. There is spread before the eye a gorgeous



Photo by Wiswall Bros., Denver Tourist Bureau.

THE VALLEY OF ESTES PARK, ROCKY MOUNTAIN PARK.

A view over the top of Elkhorn Lodge, overlooking the great basin and valleys of Estes Park. Rocky Mountain National Park was created partially because of the many thousands of tourists that visited Estes Park.

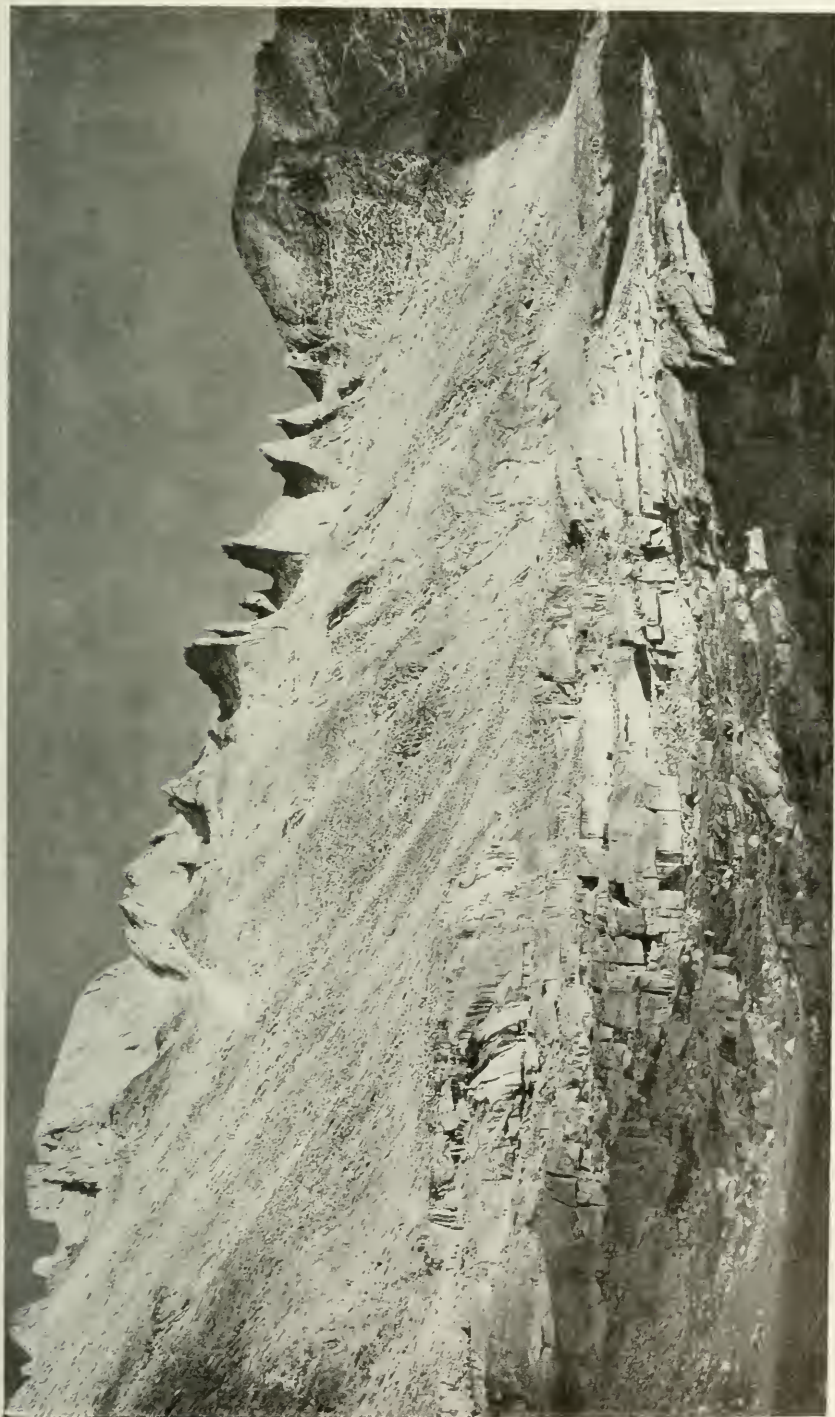


Photo by Wiswall Bros. Denver Tourist Bureau.

ROCK QUARRIES IN ROCKY MOUNTAIN NATIONAL PARK.

The most difficult trip in the park rewards the climber with the wildest view of the whole divide. Everywhere we have solid rock. This view shows clearly the summit of Long's Peak and the trough through which the last mile of ascent is made.



Photo by Wiswall Bros. Denver Tourist Bureau.

WILL-O'-THE-WISP FALLS, ROCKY MOUNTAIN PARK.

A series of snow-spray falls in the weird sculptured regions of Loch Vale. To make this trip is to climb over stone canons, recording with wonderful distinctness 17,000 years of glacial carvings.

assemblage of wonderful mountain sculpture, surrounded by fantastic and ever-changing clouds, suspended in an apparently limitless space. At first view, as one beholds the scene in awe and amazement, the effect is as of an enormous painting, a vast panorama stretching away for illimitable distances; gradually this idea of distance disappears, the magnificent work of nature seems to draw nearer and nearer, reduced apparently by an unseen microscope to the refinement of a delicate cameo. Each view becomes a refined miniature, framed by another more fascinating, the whole presenting an impressive picture, never to be forgotten."

Emerging from the esthetic to the practical, Mr. Marshall says:

"Perhaps the most attractive feature of the plan to create this park, viewed from both the national and the State standpoints, is the accessibility of the area. In considering the probable success of this proposed park, I have kept constantly in mind the enormous population of the eastern part of the United States which would derive benefit from it, its nearness to the large centers of population, and the low transportation charges in effect during the season in which it would be most visited. Estes Park can be reached from Chicago in about 30 hours and from Denver by automobile in about three hours.

These factors will lead to a large amount of travel into the park from outside the State and undoubtedly will result in its assuming a much more national character than any of the existing parks. There has been a marked increase within the last few years in the annual number of visitors to Estes Park and vicinity. It is estimated that this number has increased from 1,800 to 30,000 within a comparatively short time and, with the added attraction of the National Park, it seems safe to predict that within a decade or two 100,000 or more people from all sections of the United States will visit this area each year."

This national park is very high up in the air. The summer visitors who live at the base of the great mountains are more than a mile and a half above the level of the sea, while the mountains themselves rise precipitously nearly a mile and sometimes more than a mile higher still. Timber line is about 11,000 feet above sea level and up to that point the slopes are covered thick and close with spruce and fir, growing very straight and tall. Even at the highest altitudes wild flowers grow in profusion in sheltered gorges.

Nowhere else are the timber-line struggles between the trees and the winds more grotesquely carried out than in the Rocky Mountain Park. The first sight of the luxuriant Engelmann spruces creeping closely upon the ground instead of rising straight a hundred and fifty feet or more, arouses the interest of the tourist. Many trees which defy the winter gales grow bent in half circles. Others starting



Photo by Wiswall Bros. Denver Tourist Bureau.

MOUNTAIN CLIMBING IN ROCKY MOUNTAIN PARK.

Along the south side of Flattop Mountain there are high broken precipices of rock which hang out over the green waters of Dream Lake. It is around these rugged summits that the great black eagles of the park can be found.



Photo by Wiswall Bros. Denver Tourist Bureau.

TYNDALL GLACIER, ROCKY MOUNTAIN PARK.

This shows a glacier at work forcing out the rocks which its subterranean channels have broken off from the mountains. The cliffs of Mount Hallett can be seen on the right. In the shadow in the middle distance can be seen an isolated white spot, which is Bierstadt Lake.

straight in shelter of some large rock bend at right angles when they emerge above the rock. Others which have succeeded in lifting their heads in spite of the winds have not succeeded in growing branches in any direction except in the lee of their trunks, and suggest big evergreen dust brushes rather than spruces and firs.

Far above the timber line, rising from 1,000 to 3,000 feet, are the huge rock formations that gave the Rocky Mountains their name. Covered with snow in fall and winter and plentifully spattered with snow all summer long these bare granite masses are beautiful beyond description. During fair and sunny days they show all shades of translucent grays and mauves and blues, but on stormy days they are cold and dark and forbidding, burying their heads in gloomy clouds, from which they emerge covered with snow. A thunder-storm born on the square granite head of Longs Peak is an interesting sight. First, out of the blue sky a slight mist seems to gather, and in a few minutes this becomes a tiny cloud, which grows with great rapidity. Then out of apparently nothing the cloud swells and sweeps over the sky. Often within 15 minutes after the first tiny fleck of mist appears it is raining in the valley and possibly snowing on the mountain top, but within another half hour, during which the mountain tops undergo all the colors of the rainbow, the sun breaks forth in seemingly renewed glory.

But all of the Rocky Mountain National Park is not composed of high cliffs and bare mountains. It embraces deep gorges and grassy valleys, in the springtime gay with many-colored flowers, a glacier and glacial lakes, foaming trout streams and waterfalls, and much that is interesting in animal life. The charm of this beauty spot of nature attracts campers from all over the country. In common with most of the other national parks, the Rocky Mountain Park has become the breeding place and refuge of all the animals native to the mountain areas of Colorado. The wild life of this mountain State, which was hunted from valley to peak, has learned to find in the Rocky Mountain Park a haven of rest and security, a safe retreat from the murderous crack of the gun; yet there are no fences around the park, and the overflow of game furnishes a continual supply to the surrounding territory, where the hunter may take his toll. The park is the natural home of the Rocky Mountain bighorn, the lordly elk, deer, bear, beaver, and many smaller animals—all of which live safely within its protecting borders.

The Rocky Mountain sheep or bighorn, which abounds in this park and in many other places of the West, is an interesting example of animal life. This animal is much larger, more powerful, and has greater agility than the domestic sheep. When pursued these sheep, even the lambs, unhesitatingly drop head downward off precipitous



Photo by Wiswall Bros. Denver Tourist Bureau.

BLACK EAGLE OF THE ROCKY MOUNTAINS.

The Rocky Mountain National Park is a natural haunt for the national bird. The American eagle has its throne on the lonely cliffs of the Continental Divide.



Photo by Wiswall Bros. Denver Tourist Bureau.

SNOW BRIDGE IN ROCKY MOUNTAIN NATIONAL PARK.

A remarkable view of the snow bridge on the Bluebird trail in Wild Basin. Within its shadows quantities of wild flowers can be found.

cliffs many hundreds of feet high. As they drop they strike small ledges every few feet to break the fall, but these ledges are not wide enough to stand upon, being merely rocky excrescences a foot or less in width, from which the sheep plunge to the next and the next, and so on until they reach good footing in the valley below. So swift is the descent that, seen from below at a distance, these pauses are often scarcely apparent. The fact that the sheep always plunge head first has given rise to the opinion that they land on their curved horns, but this is untrue. They always strike ledges with legs rigid and all four feet held close together. They can also ascend very steep slopes. It is a memorable sight to see a flock of 20 or more mountain sheep making their way along the volcanic crater of Specimen Mountain in the Rocky Mountain National Park.

To stand and gaze upward at the tops of these high mountains is in itself a delightful thrill and inspiration, but in Rocky Mountain Park the traveler can do that which is far better—ascend to the top of these sky-piercing pinnacles. For many years Longs Peak was considered unclimbable, but at last a way was found through an opening in the rocks called the Keyhole. The east side of the peak is nearly a sheer precipice almost 2,000 feet from the extreme top down to Chasm Lake, which was the starting point of a glacier in prehistoric times. This lake is frozen 11 months in the year. One may mount a horse after an early breakfast and ride up Flattop to enjoy one of the great views of the world and be back in time for luncheon. The Continental Divide may also be crossed in a day.

There is no other region in America where glacial records of such prominence are more numerous and more easily studied than in the Rocky Mountain Park. The whole country has been fantastically cut and carved by gigantic glaciers of the prehistoric past. In fact these records of the period when this continent was planed and carved by the ice are so clearly and simply written in the rocks of this region that the whole story lies plain to the most casual eye. Rocky Mountain National Park, even though it does not contain any outstanding natural wonder, does have the distinction of inclosing a most beautiful part of mountain scenery for which the western part of North America is noted. Indeed, its chief charm is its simplicity and lack of the wonders that have made our other parks famous. At no place in the country is there a spot where so many people can come into so close a communion with nature as in this playground in the Rockies.



TEACHING PORTUGUESE IN THE UNITED STATES¹

THE vivid interest now being displayed in the United States with regard to Latin American conditions, and particularly the attention which is being directed to Latin American markets, give pertinence to a few remarks on the question of the teaching in the schools of the North American Republic of the Portuguese language and the correlated subjects of Brazilian geography, history, and economics.

The Spanish language has found place in the curricula of a large number of the educational establishments of the United States, having been taught for many years from a literary and linguistical point of view as a member of the romance group; and in recent times instruction in Spanish has taken on a practical and utilitarian aspect which has proved highly beneficial to people whose affairs place them in contact with the inhabitants of the Spanish-speaking countries.

Portuguese, however, has not been accorded anything like the attention which has been bestowed upon its peninsular neighbor. On the contrary it appears to have been relegated, Cinderella-like, to a dark corner in the background. There is hardly any use, at this stage in the evolutionary process of the relationship between the United States and Latin America, to lose time investigating the causes of this indifference toward the Portuguese language. Let us rather turn our attention to the reasons—urgent reasons—why this indifference should be dispelled as speedily as possible and give place to an active propaganda for the teaching, not only of the language, but of the correlated subjects above referred to.

In the enumeration of these reasons let us put aside for consideration a little further on in this sketch the aspects of chronological order, linguistical value, and literary merit, and examine in the first place the rôle which a knowledge of these subjects is destined to play in the development of trade between the United States and Brazil.

It is an established rule that, when a manufacturer wishes to sell his goods, he has recourse to the services of representatives, agents, or salesmen, either traveling or stationary. Now, if we admit that salesmanship is an inborn gift like the genius of a poet, yet we are bound to concede that it must be perfected like any other talent, a fact of which any salesman is well aware. Prior to the outbreak

¹ By Langworthy Marchant, of Pan American Union Staff.

of the war in Europe, manufacturers in the United States had, with few exceptions, built up their industrial and commercial status catering to the home market. Their salesmen had to travel throughout the United States and offer their products to the American merchant and consumer. Evidently, beyond his natural gift and the study and practice of his art, the salesman had nothing to really learn except the particular line of goods which he proposed to sell. He knew his public, for it is essentially the same everywhere within the bounds of this great country, and could address himself equally well to a set of customers in Maine or California, Florida or Washington. His Americanism and the exercise of his necessary natural talent, aided by observation and practice, would enable him to accommodate himself to whatever local idiosyncrasies he might meet in any part of his American field; and so, he was left at full liberty to devote his entire attention to the study of his goods and to the improvement of his methods of demonstration. When taking up the question of opening campaigns in the foreign markets, manufacturers, and even very excellent salesmen, are apt to delude themselves into the belief that the problems which they will have to confront are in every way similar to those which they have successfully solved at home. For this reason there are manufacturers who still insist that the chief requirement of a salesman for any Latin American country is to know his line and have experience in the handling of it in this country. The error becomes evident on reflection. The logical elements on which any business must depend for its realization is the conviction in the mind of each of the parties that the transaction is beneficial to himself. In the present case the salesman starts out with that conviction, and it only remains for him to plant a like conviction in the mind of the prospect. In the United States the salesman was entirely at home, able to revel in his knowledge of human nature as represented by his prospect, and in the use of all his flowing eloquence, to convert the prospect into a buyer. But now see this happy salesman, so successful in the home field, thrown suddenly into a far-away country, to whose people he is a stranger as they are to him, knowing nothing of their habits, their culture, their peculiarities, their language. Sampson-like you will find him shorn of his strength; his smooth eloquence counts for naught, and his vocal efforts border onto distraction as he seeks, no longer to impress by a well-chosen word or a timely inflection, but only to try whether it is possible to make himself understood. Where expression is halting, there can hardly be a clear demonstration, and less still the lucid and persuasive drawing up of conclusions so necessary to the favorable termination of any transaction. And he is reduced to the extremity of laying hold of his sample or catalogue and pointing to it in the hope that the good-natured Latin may be pleased to see the qualities with

which his own mind is filled to saturation, but which his stuttering tongue refuses to express.

How is all this to be avoided? What remedy can be suggested for a situation in which so many American manufacturers find themselves handicapped? The answer can be but one. The agent, the representative, must be prepared to talk to the people with whom he proposes to deal. It is not sufficient to talk badly; to memorize a few rules and phrases and then make up some terrible jargon of his own, which, unfortunately, is often the case. He must speak at least fairly well; make himself understood, and in his turn understand, not only perceive what his prospect says, but divine his particular shade of meaning by the tone in which he says it; in short he must be familiar with human nature as represented by the people with whom he finds himself in Latin America, just as he is familiar with human nature in his own people in the United States. It is the same old human nature everywhere but it sometimes expresses itself differently, and assumes outwardly different aspects, determined by different ethnical grouping and different forms of culture.

It is evident that the knowledge above described can not be acquired simply by academic endeavor. It is the natural growth of acquaintance and comradeship. But it can be acquired well and quickly by a person who enters the field prepared to learn, one who has acquired, academically, a fair command of the language and is versed in the history of the country, its geography, its productions, its resources, its commercial figures, its usages, its every-day generalities. And on the other hand it is immensely difficult of acquisition to a person who has no such preparation. To enter the Brazilian field of commerce without mental preparation especially adapted to that field reminds us of the case of the landlubber who crossed over to the city in the ferry in order to buy a manual on the art of swimming, and, when, on his return, the boat capsized, and he found himself struggling in the water, began to fumble in his pockets for his manual, attempting to adjust his glasses and look for the pages containing the elementary rules, all the while striving frantically with legs and arms to keep himself afloat.

What has been said serves to demonstrate the urgent necessity of tuition in the Portuguese language and the correlated subjects above mentioned; and there can be no doubt that it is incumbent on the best known and most highly esteemed centers of learning of the United States to take up the matter of imparting such tuition. The practical inception of the work belongs to them, and not any one else, whether as individuals or as a collective body. To them it pertains to foresee the coming need, which will increase with the passage of time, and prepare to meet the contingencies to which it will give rise. The university, the college, the school, is the orientator of the student,

his guide as to the outlook with regard to utilizable fields of intellectual acquirement. If the school waits for the student to demand development in a certain class of work, why then, naturally, such work must pertain to the closing, or finishing part of the course, for it is only in this stage that the student is supposed to possess sufficient age, knowledge, and experience to foresee the contingencies which may occur in connection with any given line of activity, and particularly with one lying in a field which is more or less intrinsically new. Advanced students may discover for themselves the value of tuition in these subjects and demand it; but advanced students are those whose school days are numbered, who, in a few more months will bid adieu to school life and launch out into the world of practical experience. Consequently, the time which they will find available for the acquisition of these subjects is not sufficient. They can at best, in so limited a period, gather a few rudiments, which will prove woefully scant in the hour of need. For, let us not delude ourselves, the sort of tuition required in these subjects is one of real practical value, a real speaking and writing knowledge of the language and a real acquaintance with the history, geography, and economics of the Brazilian Republic. A smattering of these things, especially as regards the language, is little better than useless, and to inculcate such smattering as real knowledge, as some eager aspirants to positions do, is not honest.

The Portuguese language is one of the two dialects of the Iberic Peninsula which have arisen to the position of literary languages. It was originally one of the many dialects into which the popular Latin of the Province broke up after the fall of the Roman Empire, but it possesses marked characters of individuality which distinguish it very clearly from any of the Spanish dialects and from the literary Castilian of our day. The Spanish dialect which it most resembles is the Gallego, one of the most divergent forms of Spanish, which has retained its dialectic character to this day, while the Portuguese, under the isolating influence of an independent government, has evolved into one of the most beautiful instruments of expression in existence.

In a way Portuguese is unique among modern languages. Its case endings have all worn away, and yet the language is as flexible as the polished Latin of classic times; a great point of strength, since it enables the speaker to place his words at will in the relative positions of force according to the stress which he would lay upon them. The vocabulary is abundant, there being many forms from which to choose according to the particular shade of thought which it is designed to impart. There is not the same abundance of analytical forms made up of relative words and complements as in English, but on the other hand the great facility which the speaker enjoys in choosing and placing his words renders expression fluent and elegant,

endowing the language with a subtle spirit, which, so to speak, transmits the nuances of thought by induction rather than by analytical detail.

These lexical and syntactical characters of the Portuguese language invest it with the quality of infinite variety, which precludes all monotony, and makes it a pleasant one to listen to.

Philologically and linguistically, Portuguese is one of the most interesting of modern languages, not only from the point of view of its Latin affiliation, but from its importance as an exponent of Gothic and Moorish influence in the peninsula.

From a literary point of view, the Portuguese language is exceedingly rich in the quality of its productions, among which, as scholars know, stands out with a great luster the immortal epic of the *Luziad*. The literature of Brazil has been evolving for a long period, years and years before the independence, and can boast of a multitude of works whose merits would not pale in comparison with the best anywhere.

A language like this, so filled with esthetic and dynamic qualities in addition to its other titles of distinction, is well deserving of a definite place in the curricula of our schools, and if to the considerations just dealt with we add that, in the natural course of events, Brazil may be expected, within the present century, to number one hundred million Portuguese-speaking people, we must conclude that the Portuguese language is destined, at no distant period, to reach a position of importance ranking not far behind that of English; and so, just as the Brazilians and Portuguese give our language a prominent place in the programs of their schools on account of its importance, it behooves us, for a like reason, to do the same with theirs, in order that we may not be placed in the disagreeable contingency of finding ourselves inefficiently equipped to meet the problems which will arise and grow more and more intense with the development of our relations with the great Republic of Brazil.



COMODORO RIVADAVIA PETROLEUM DEPOSITS¹ :: ::

THE information given below, based on official data compiled by the Argentine Government, shows the importance, not generally known up to the present time even in the Argentine Republic, of the Comodoro Rivadavia petroleum deposits.

Seventy-seven wells have been drilled in the zones referred to, 7 of which have been abandoned as nonproductive, 17 are being deepened, 14 cased and prepared for exploitation, and 39 are in operation in the production of oil. In 1916 the drilling of 15 shafts was completed. During that year the daily output of oil varied from 13.16 to 22.27 cubic meters; in 1917 from 13.19 to 27.87 cubic meters; and during the first three months of 1918, from 11.68 to 13.10 cubic meters. The causes of the decrease in the 1918 period are attributed to strikes, closing of some of the shafts for examination and repair, and the partial or total stoppage of the oil flow in some of the wells, especially in a number of the older borings which had been constantly producing for a term of several years. It should be borne in mind, however, that the output of the new wells has increased considerably.

The total oil production of the Comodoro Rivadavia petroleum zone in 1916 was 88,398 tons, as compared with 140,732 tons in 1917, and 46,047 tons during the first three months of 1918, or an estimated output for the latter year of over 184,000 tons. The value of the output of these deposits in 1916 was 3,970,952 pesos (paper peso = about \$0.4475); in 1917, 9,372,787 pesos; and in three months referred to in 1918, 3,563,828 pesos. The average value per ton in 1916 was 45 pesos; in 1917, 67 pesos; and in 1918, 78 pesos.

Considering the extent and richness of these deposits, as well as the growing need of a larger supply of this valuable product, a systematic and efficient exploitation is most desirable, to insure which machinery, spare parts of machinery, cables, and other necessary material must be supplied, as well as the maximum number of drills required, bearing in mind that a drill can only perforate, on an average, 2½ wells annually. One great difficulty in supplying drills is that they are not made in the Republic, and must, therefore, be obtained abroad under such conditions as may be deemed most advantageous.

Shaft No. 49 is the one that has produced up to the present time the greatest quantity of gas. This well is exceedingly important, not

¹ From *La Época*, Buenos Aires.

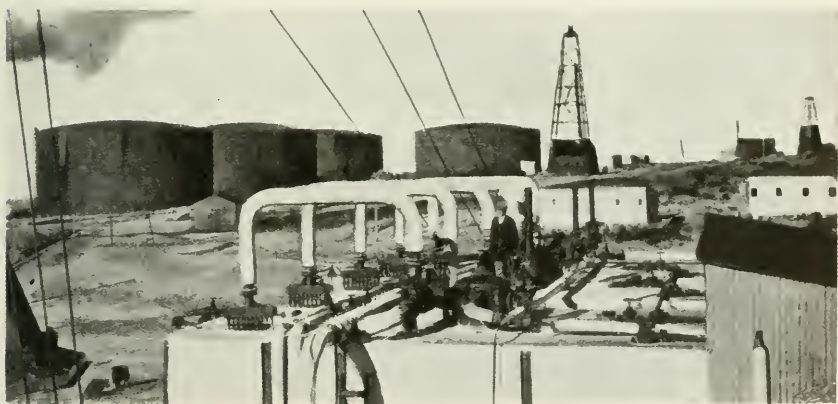
only because of the excellent quality of its gas as a fuel, but also because this particular gas may be utilized in refining crude petroleum, for heating purposes, as an illuminant, and in the production of steam for operating drills, to say nothing of its future use in metallurgical furnaces, in the manufacture of Portland cement out of the extensive deposits of fine clay found in the vicinity, and its use in supplying motive power to the machine shops in the neighborhood.

The petroleum refinery now at Comodoro Rivadavia is not as large as it should be, the capacity of the plant being only 12,000 tons of petroleum per annum. The development of this branch of the oil industry in Comodoro Rivadavia will naturally depend upon the expediency of preparing at that place the different by-products of petroleum. In the meantime it should be borne in mind that a plant large enough to refine the oil needed by the national fleet, should its fuel be changed from coal to petroleum, would require an annual capacity of not less than 100,000 tons. The operation of the refinery will necessitate the making of barrels in which to transport the oil and this, together with the enlargement of the plant, will require the investment of considerable capital. At the present time the barrel containing the oil, due to the increased cost of the raw material used in its manufacture, is more valuable than the oil itself.

The quantity of free or light oils in the substances taken from the deposits varies from 10 to 15 per cent, leaving a residue of from 85 to 90 per cent of crude oil available for industrial purposes. As the demand for petroleum and oils of various classes will doubtless tend to increase in future, the necessity for operating the refinery on a more extensive scale is evident. Until the State is prepared to refine all the oil taken from the deposits it is desirable to encourage the operation of private refineries, in order to avoid waste and to insure the utilization of the entire output of the wells.

The machine shops at Comodoro Rivadavia, while now of considerable extent and importance, are insufficient to properly meet the increasing needs of that region. The difficulties encountered in enlarging and adequately equipping these shops consist not only in a lack of capital but also of skilled and unskilled labor. It is believed that the latter difficulty could be temporarily overcome by the employment of sailors, if this could be arranged with the Government, from the Argentine fleet. It should be borne in mind, however, that to secure workmen in adequate numbers good wages must be paid.

In 1917 the Comodoro Rivadavia oil fields gave employment to 1,196 skilled and unskilled workmen and to 172 other employees. In 1916 the force engaged in this work required a disbursement for wages of 1,384,965 pesos, and in 1917, 1,531,381 pesos. The amount



PETROLEUM INDUSTRY IN THE COMODRO RIVADAVIA FIELDS, ARGENTINA.

The total oil production in 1916 of the Comodoro Rivadavia petroleum zones was 88,398 tons and is steadily increasing. These fields give employment to over 1,200 workmen yearly. Modern dwellings have been constructed and fitted up with modern improvements in a sanitary manner. Top picture: A close view of the wells. Bottom picture: Machinery and receiving tanks, the latter having a capacity for storing 25,000 tons of petroleum.

paid out in 1918 was not available at the time of going to press, but because of increased production during that year, a rising wage scale and the shortening of the hours of labor, it can be safely surmised that the expenditure during the past year was greatly in excess of that of previous years.

Modern dwellings for workmen have recently been constructed at Comodoro Rivadavia, fitted up in the most approved sanitary manner and provided with all modern conveniences. These have been erected out of a fine quality of building stone which exists in large quantities in the immediate vicinity. This has largely added to the comfort of the workmen and has been a health measure of great value. The technical force employed in the Comodoro Rivadavia petroleum zone, particularly as to the drillers, has proved to be quite efficient, notwithstanding the fact that it was selected at random and as the exigencies of the work required. Among this class of workmen the foreign element predominates, as would naturally be expected to be the case because of the greater opportunities enjoyed by European and American workmen in operations of this kind, the more especially so because heretofore the mining industry in any of its branches has been but little developed in the Argentine Republic. In the exploitation of these oil fields it is the policy of the management to use Argentine workmen so that they will be capable of performing the most difficult technical duties connected with the drilling of the shafts, the extraction of oil, etc.

The geological studies of the Comodoro Rivadavia petroleum belt are exceedingly important, not only because they will make available information that will enable these deposits to be better and more scientifically utilized, but also because they will furnish an approximately correct estimate of the future production of this oil zone. With this object in view samples are taken in each of the borings of the different strata pierced by the drills, and these samples are given to experts for examination and study. As to the classification of the deposits, their origin has not yet been definitely determined, although it is possible that they belong to the class technically known as "pockets" or "pools."

To properly develop this oil zone it is desirable to at least triple the number of wells now in exploitation with the object of obtaining an annual output of from 800,000 to 900,000 tons of petroleum. In order to accomplish this, drills and petroleum extraction pumps should be purchased, tanks erected for storing the oil in Comodoro Rivadavia, as well as in the great consuming centers of the country, and adequate transportation facilities provided, all of which requires time and a large investment of capital.

Prospecting work has been done by private parties in the region immediately adjoining the oil zone established by the Argentine



HIS EXCELLENCY DR. FRANCISCO TUDELA Y VARELA, ENVOY EXTRAORDINARY
AND MINISTER PLENIPOTENTIARY FROM PERU TO WASHINGTON.

Dr. Tudela y Varela was born in Paris in 1876 and, although a young man, occupies a prominent position in public and intellectual life in Peru. After preliminary studies in Europe he entered the University of San Marcos in Lima, being graduated from the colleges of law and political science. For the past 12 years he has been professor of diplomatic law and history of Peruvian treaties in his alma mater. In 1901 and 1902 he was secretary of the Peruvian legation in Colombia, and had charge of the secretaryship of the presidency of the Republic, during the administrations of Don Manuel Candamo and Don José Pardo, from 1903 to 1907. Dr. Tudela y Varela was for 12 years congressional deputy, becoming president of the Chamber of Deputies in 1915, the year in which he acted as mayor of Lima. In 1913 he occupied the position of minister of foreign relations, and in 1914 became minister of the Treasury. In 1917 he was president of the council of ministers and held the portfolio of foreign relations. It was during this time that he proposed to Congress the severing of diplomatic relations with Germany. On January 2, 1919, he was made minister plenipotentiary of Peru to Washington.

Government. Due largely to the lack of capital their efforts have been attended with but little success. This work should be encouraged, and refineries should be established of sufficient capacity and equipment to properly handle all of the oil extracted with the object, if possible, of furnishing better grades of oil at reduced prices. The Argentine Government is alive to the needs of a more extensive development in this great oil belt, and will doubtless, in due time and in its own wise, progressive way, do whatever may be necessary in the use of Government funds in this industry, as well as in attracting the investment of private capital, both national and foreign, to one of the richest and most promising petroleum fields in South America.

PROMINENT IN PAN AMERICAN AFFAIRS

COLONEL THEODORE ROOSEVELT the twenty-sixth President of the United States, known the world over as one of the most versatile and forceful statesmen of this age, died at his home, Sagamore Hill, Oyster Bay, Long Island, N. Y., on January 6, 1919. His death was peaceful, resulting from rheumatism and a complication of other diseases.

Theodore Roosevelt was born in New York City on October 27, 1858. His love for nature was early manifested, and many of his boyhood days were spent in roaming the Long Island woodlands. He entered Harvard University in 1876, graduating in 1880 with the degree of A. B. He also received the degree of LL.D. from Columbia University in 1899, Hope College in 1901; Yale, 1901; Harvard, 1902; Northwestern, University of Chicago, and University of California in 1903; University of Pennsylvania and Clark University in 1905; George Washington University in 1909; Cambridge University in 1910; and the degree of D. C. L. from Oxford in 1910.

After his graduation from Harvard, Roosevelt went to Europe, and on his return took up the study of law with his brother. When only 24 years old he was a member of the New York State Legislature. When his term as assemblyman had expired he was sent, in 1884, as a delegate to the Republican party convention which nominated James G. Blaine for President. His political activities ceased temporarily at this time, and in order that he might improve his physical strength he went west to live an outdoor life. He



THEODORE ROOSEVELT.

purchased two ranches in the State of North Dakota and for two years lived the life of the hardiest plainsman.

On abandonment of ranch life he returned to politics. As a civil service commissioner from 1889-1895 over 20,000 offices under the Government were put into the classified service to be obtained and held by merit. He resigned from the Civil Service Commission and became president of the Board of Police Commissioners of New York City from 1895-1897.

In President McKinley's administration Mr. Roosevelt was appointed Assistant Secretary of the Navy, but resigned at the outbreak of the war with Spain to seek service as a field officer. Secretary Alger of the War Department offered to make him colonel of a regiment, but he thought his experience was insufficient to warrant him in accepting the position. It was when Congress authorized the organization of three cavalry regiments from the frontiersmen of the west, that it became known that Roosevelt was to raise one of these and perhaps the most remarkable fighting force ever in the field began to gather. The work of this regiment, popularly known as the Roosevelt Rough Riders, became famous, and Mr. Roosevelt was appointed to a colonelcy.

He was governor of the State of New York from January 1, 1899, to December 31, 1900, and was chosen Vice President on November 4, 1900, succeeding to the presidency upon the assassination of President McKinley, September 14, 1901. He completed that term and was elected for the term 1905-1909. During Mr. Roosevelt's administration a notable achievement was the taking over by the United States of the project to build the Panama Canal. The Nobel Peace Prize of \$40,000 was awarded to Mr. Roosevelt in 1906.

After his presidential duties were completed Col. Roosevelt's love of the outdoors led him on a hunting trip to Africa in 1909-10 in search of big game. He visited South America in 1913, delivering addresses before various universities and learned societies. At the head of the Roosevelt-Rondon Expedition in Brazil in 1914 he explored the famous "River of Doubt," a tributary of the Madeira River, for a distance of 600 miles. This river was subsequently named "Rio Theodoro" in his honor.

Mr. Roosevelt was intensely interested in Pan American affairs and was a true Pan American. He watched the work of the Pan American Union closely and was one of the speakers at the exercises of the laying of the corner stone of the building in 1908.

From 1909-1914 Mr. Roosevelt was one of the editors of the Outlook magazine. He was the author of many books, including "Hunting Trips of a Ranchman," "History of New York," "The Wilderness Hunter," "American Ideals and Other Essays," "The

Strenuous Life," "True Americanism," "History of Literature and Other Essays," "Through the Brazilian Wilderness," and several others. As a forceful and eloquent orator he was recognized throughout the world.

JOHN REID SILLIMAN, United States consul at Guadalajara, Mexico, died at his post on January 17, 1919, as a result of a relapse following an attack of influenza. Mr. Silliman had been connected with Mexico since 1897, when he first went to that country as a farmer. His activities during the trying years of 1914 and 1915, when relations between the United States and Mexico were more or less strained, placed him in the front rank of the United States Consular Service.

John R. Silliman was born in Greene County, State of Alabama, in 1855. After graduating from Princeton University and receiving the degree of A. B. in 1879, he was employed in Texas as a railway clerk and insurance agent until 1897, when he moved to Mexico.

On December 13, 1907, Mr. Silliman was appointed vice and deputy consul at Saltillo, Mexico. It was while he was at this post that he represented the United States in various diplomatic controversies. Later, as a personal representative of President Wilson after the recall of the United States diplomatic representatives, Mr. Silliman exercised virtually the powers of an ambassador. He also figured largely in the Mediation Conference held at Niagara Falls, N. Y., in 1915. On July 12, 1916, he was appointed as consul of class seven and assigned to Guadalajara, where he remained until his death. Mr. Silliman was a forceful writer, and contributed to the *BULLETIN* as well as to other magazines most interesting descriptive and historical sketches of Mexican cities, peoples, customs, etc. In his death Pan Americanism loses an able advocate and the Pan American Union a friend and appreciated coworker in the cause.

DR. INGLEZ DE SOUZA, noted statesman and well-known member of the Brazilian Academy of Letters, died in Rio de Janeiro September 6, 1918. A rigid observer of time-honored precedents in legal annals, patron of letters, and independent, although conservative, as a thinker, this prominent lawyer was one of the most influential and admired figures in the political and intellectual life of Brazil. Being made federal deputy from Pará, he labored indefatigably for the development of his native State. The premature death of Dr. Souza was keenly felt by all those interested in the progress of juridical science in Brazil.

Sr. Dr. JUSTINIANO SOTOMAYOR died unexpectedly in Santiago December 1, 1918. Chile's sister Republics join her in mourning the loss of the statesman whose public services had been always of the highest type. During the promising career, which was cut short by



JOHN R. SILLIMAN.



DR. INGUEZ DE SOUZA.



SR. DON JUSTINIANO SOTOMAYOR.



SR. DON LORENZO MARROQUÍN.

his untimely death, Dr. Sotomayor had revealed exceptional talent, rare administrative ability, strict integrity, and a liberal yet exacting critical judgment. First as minister of industry and later as director of the national railways, Dr. Sotomayor leaves an enviable record as an untiring, zealous, and intelligent administrator. He was director of the School of Arts and Sciences at the time of his sudden death. It was largely owing to his efforts that the institution attained its present standards and success. Dr. Sotomayor had returned to Chile, but a short time before his death, from an important governmental mission for his Government to the United States.

SR. DON. LORENZO MARROQUIN, Colombian statesman and patron of letters died in London early in November of the past year. Señor Marroquin's literary judgment was of unquestionable authority, his scholarly criticisms of the novel, the essay, and of journalism being of decisive influence. In the public life of his country also he was a conspicuous character, whether as legislator, minister of state, or diplomatist, having taken an active part in the most important political events of the past decades. Keen as an observer, erudite in scholarship, able in politics, possessed of an insatiable curiosity in research, Señor Marroquin was, above all, a true gentleman.

He produced several romances and historical works, his latest and most popular novel being called "Peace" ("Pax"), in which, vividly and convincingly, he related his impressions of the great war and his regret in watching the destruction of temples and monuments revered for centuries. The book, typically Colombian in spirit and style, is highly esteemed by all Spanish-speaking people.



PAN AMERICA IN THE MAGAZINES

The Commercial Bulletin is the title of a new official publication issued by the economic and commercial section of the ministry of foreign affairs of the Republic of Brazil. The first numbers of the Bulletin, published in separate Portuguese, English, and French editions, and bearing date of July, 1918, were recently received by the Pan American Union, and the contents are of such informative value and interest that the publication merits more than passing notice. We herewith reproduce the introduction as follows:

The diversity of climate and production that enables this country to present so extraordinary a variety of commodities insures to Brazil a leading place in the world's markets in a not distant future. Fresh outlets have been and are still being found for production almost daily.

Before the war exports were largely restricted to a few great staples, such as coffee, manganese, rubber, matte, tobacco, cocoa, raw cotton and its seed, carnaubu wax, construction and cabinet woods, and table fruits. Since then new markets have been repeatedly opened and for the first time Brazil has been able to export certain products, such as rice, chilled meat, Indian corn, and cassava meal. So long as the war lasts the great variety of our products opens out vast possibilities for the extension of our trade with markets not yet closed by the war. At the close of the war there will be a complete transformation, when immense quantities of commodities will change hands.

The course of commerce will undergo great modifications, and whilst some of its currents may be diverted, new ones will doubtless be developed. This period of reconstruction and repair, accompanied in the Old World by extraordinary development of manufactures, that in its turn, will demand increasing supplies of raw material, will, with restrictive measures and insufficiency of labor, still further enhance the demand for food products.

Besides the neighboring countries of South America, others may likewise find difficulty in obtaining manufactured goods from the now belligerent countries, and be forced to substitute them by those of other origin. Industrial development in the United States and the consequent demands of its own markets will add to the confusion and force customers to look elsewhere for satisfaction of their requirements.

Everything, in fact, in this eventful phase of the world's history, points to intensive demand for raw materials and foodstuffs by the great manufacturing countries that agricultural countries alone can satisfy. The possibilities for a country like Brazil with incomparable undeveloped resources are obvious. In virtue of the fertility of its soil Brazil is in a position to furnish not only the raw materials of which so many other nations stand in need, but even some classes of manufactures that other South American countries do not yet produce.

Traditional production will thus find new opportunities. In the east of Europe, in Asia and northern Africa, much may yet be done to stimulate the consumption of our coffee and tobacco, and to create new markets for our sugar, cocoa, matte, mandioca meal, and even xarque (dried beef).

The share consuls are called on to take in the promotion of commercial expansion is vital. In direct touch with both commerce and industry in their respective dis-

tricts, our consuls are in a position to not only institute standing inquiries as to demand for our better known staples, but to stimulate the introduction of others not yet or little known in their respective markets, and, by supplying home producers with samples of similar products of other countries, create new markets for our own.

This will, no doubt, entail exhaustive and uninterrupted investigation, not merely of the staples we have always supplied, but the requirements of local industries, the possibility of supplying such products ourselves and determination of the obstacles that prevented manufacturers hitherto from taking advantage of our resources. Inquiries should not, therefore, be limited to well-known staples; should not, in fact, be purely defensive, but offensive, and by collection of samples of similar imports from other countries, furnish elements for competition by Brazil.

After the war much capital will inevitably be employed by the now belligerent countries in reconstruction, and it is possible that, in consequence, rates of interest may rise; but for their own recuperation such countries will have to supply capital to others less developed, in which rates of interest are always higher.

Brazil, with her vast undeveloped resources, offers a splendid field for enterprise like this, seeing that the State not only favors but already protects and offers guarantees to naval and cold-storage construction, grants concessions for railways and roads, for plantation of cereals, sugar factories, port works, cattle farming, plantation of eucalyptus, textile manufactures, coal mining, and iron foundries. No country is richer in minerals. Side by side with veritable mountains of iron ores, veins of gold and silver are to be found. Manganese abounds, as also monazite, copper, and mica. Coal is found from Amazonas to Rio Grande do Sul, and water power for development of electricity all over the country.

Cereals may be cultivated in any part of the country, and in many districts yield two crops a year. Adaptation of exotic cultivation would be simple and profitable, because in Brazil every variety of climate for agriculture can be found. On the highlands the climate is temperate, because altitude is corrected by latitude. Cultivation, already varied, is capable of further great development and only awaits the stimulation of demand. Moreover, there need be no hesitation in accepting orders, seeing that for many of our products there would be time enough to plant and harvest before delivery fell due.

Extensive cultivation comprises rice, coffee, cocoa, Indian corn, tobacco, sugar cane, cotton, beans, and mandiocca meal. Rubber and herva matte are yet in the extractive stage, although in the State of Amazonas rubber is not only extracted but cultivated, and copahyba and other oils, vanilla, sarsaparilla, resins, cabinet wood, medicinal plants, fibers, plumage, gum arabic, and indigo are exported from Amazonas and Para, and, in addition, cocoa, alcohol, vegetable ivory, tobacco, orchids, Brazil nuts by Para, and carnauba wax likewise by Maranhao.

Piauhy exports rubber, tobacco, carnauba wax, plumage, skins, maniçoba rubber, capahyba oil, construction and dye woods.

Ceara: Cotton, carnauba wax, cereals, skins, and plumage.

Rio Grande do Norte: Cotton, carnauba wax, salt, sugar, and fish oil.

Parahyba do Norte: Cocoa, cotton, sugar, and carnauba wax.

Pernambuco: Sugar, cotton, table fruits, and jellies.

Alagoas: Cotton, sugar, and fish oil.

Sergipe: Sugar, cotton, cocoa, and tobacco.

Bahia: Cereals, rubber, tobacco, sugar, cotton, manganese ores, coffee, cocoa, precious stones and carbonates, plumage, skins, fibers, resins, piassava, hides, monazite, woods, mangabeira rubber, and ipecacuanna.

Minas Geraes: Dairy products, coffee, cereals, ipecacuanna, fibers, native gold, table fruits, precious stones, skins, plumage, tobacco, coffee, timber, cotton, iron, manganese, and other rare minerals.

Espirito Santo: Coffee, fibers, monazite, sugar, woods, and bismuth.

Rio de Janeiro: Coffee, sugar, cotton, salt, table fruits and jellies, fibers, and manufactures.

São Paulo: Coffee, cotton, tobacco, cereals, dairy products, rubber, woods, skins, plumage, and manufactures.

Paraná: Herva matte, woods, fruits, wines, cereals, and oils.

Santa Catharina: Herva matte, woods, fruits, wine, cereals, and oils.

Rio Grande do Sul: Cattle, hides and offal, woods, herva matte, cereals, manufactures, skins, and wines.

Goyaz and Matto Grosso: Rubber, woods, precious stones, plumage, and cotton.

All over the country textile and other factories are to be found. In cattle Brazil ranks third of all the countries of the world, and great cold-storage plants at Rio de Janeiro, São Paulo, and Rio Grande do Sul are engaged in export of chilled meat. In every State cereals are cultivated, cattle raised, and hides exported; minerals are to be found and coal abounds; whilst but lately petroleum has been found in Alagoas. The elements for catering to the world's trade and raw materials for foreign manufacturing countries, as well as development of every kind of industry of our own, are found amongst us in inexhaustible quantities.

So vast a country, occupying the biggest uninterrupted area of all, demands ample transport facilities for development. The construction of roads and railways, favored by special laws, affords excellent employment for capital, and the more railways are developed the easier will communications be and consequently the greater the return on capital invested therein.

In the world's economic restoration the function of Brazil will be of the highest importance if only advantage be taken of actual circumstances to introduce products that for the first time we are now in a position to export by creating uniform commercial types. By keeping traders and producers informed as to the conditions of the respective markets and formation of types the assistance that our consular service may lend to the rapid absorption of production is of the greatest importance.

The object of the Bulletin is to keep consuls informed as to developments at home and in other countries, to classify and tabulate the information and suggestions their reports supply, and through the medium of French and English editions to make known in foreign countries the conditions and possibilities of our own importing and exporting trades, the evolution of our economic conditions and their marvelous possibilities.

Commercial action to-day should be conscious. Empiric methods must always give way to the experience that economic knowledge illumines.

The action of our commercial agents abroad should, therefore, be guided and the requisite elements be furnished by them to traders and industrialists abroad for forming their own opinions as to the existence in Brazil of the articles they are interested in and the facilities for obtaining same.

Taking advantage of the reorganization of the Brazilian foreign office, a commercial department has been created for stimulation of economic development on the lines generally adopted by all leading industrial countries, to which the simultaneous reorganization of the consular service will materially contribute.

Following the introduction is a detailed and analytical statement of Brazil's foreign trade from 1913 to 1917, inclusive. This is in turn followed by an interesting review of the Brazilian sugar industry, and that by a brief account of the mica industry of the country. Other sections of the publication are devoted to "Consular Reports," "Legislation," "Woods," and "Market Prices of Principal Exports at Producing Centers and Ports." Especially noteworthy is the section devoted to "Woods," in which the wonderful diversity of the

forestal wealth of the country is outlined in considerable detail, and under which are given the common as well as botanical names of the hundreds of species and varieties of trees whose timber is valued for different purposes, the lists being arranged under subheadings which indicate the special uses to which the lumber is adapted. Altogether the publication contains most valuable information, excellently arranged and authoritative in character, and the Brazilian ministry of foreign affairs is to be congratulated on this enterprising feature of its activities.

Amado Nervo at Columbia University, in the January number of *The South American* (New York), is an account of the appearance of Mexico's famous poet in the lecture hall of New York's great



AMADO NERVO.

university, where he gave an exposition of his own happy philosophy and recited some of his best known poems as illustrative of his theme. Señor Nervo, besides being one of the most noted of living Latin American poets and literateurs, is a trained diplomatist, having spent many years in the diplomatic service of his country in Europe. Prior to his recent appointment as envoy extraordinary and minister plenipotentiary of Mexico to the Argentine Republic, he was for some years first secretary and chargé d'affaires of Mexico

in Madrid, Spain. The appreciative article published by the *South American* is herewith reproduced in full:

One evening early in December the universally famous Mexican poet, Amado Nervo, who has recently been appointed the envoy of his country to the Argentine Government, appeared at one of the halls of Columbia University in response to an invitation from the faculty to read some of his poems and to explain the philosophy that inspired them.

Long before the arrival of the poet a large crowd of people filled the hall from end to end. Anyone would have fancied himself in Buenos Aires, Madrid, or Santiago to see that crowd composed almost entirely of Spanish Americans. On the floor and up in the galleries no other language than Spanish could be heard, and any expert in faces might have pointed out the 20 nationalities represented in that hall.

The appearance of Nervo was the occasion for an ovation. Slender, dark, with Roman nose and bright eyes, the poet stood on the tribune and said that he was proud to have been called by one of the foremost universities of the world to recite some of his poems and to explain the philosophy that inspired them. As to the latter he said that the world is neither beautiful nor ugly, neither sad nor gay, that things are neither black nor rosy, neither big nor small; that every thing is as we wish to make it; all depends on the point of view from whence we judge it. A pessimist is inclined to make the worst of everything, and he reaches the end with a load which he is unable to support. On the other hand, the optimist looks at things from the best side and lives quietly and happily in hope and faith.

Nervo said that as he gets older he feels himself nearer the point from which to judge the ample angle of life. Even within life itself, he, unable to see himself in focus, could not account for the philosophy of things. He made a comparison which clearly explained his idea to the audience:

"The color in a picture, if gifted with the faculty of reason, seeing at its side other tints, meaningless to itself, with the appearance of red, green, and blue stains, and unable to distinguish the harmony of such a combination, would feel out of place, as if thrown at random on the canvas, and would endeavor to get away because incapable of understanding the function which it here performed. But, once out of the picture, and seeing this in perspective, it would be able to appreciate the whole conception, to understand the fine blending of colors which gives life to a landscape or a portrait of the human figure, and would immediately realize the void occasioned by the displacement of one component part, and therefore hasten to return to its place. In the same way, men whom we meet by chance in life, we see them face to face not too closely, and we understand and appreciate their personality as a whole. No splashes of paint are thrown at random onto the illimitable canvas of human life. Each of us is a color, a tint, indispensable to the harmony of the entire picture.

"Things appear to me," said the poet with a gesture of profound conviction, "to have an inclination toward goodness, as if they wanted to be good. They knock at our door, and we are responsible for their deterioration if we are not inspired by the spirit of optimism. There are in the world more good things and good men than bad, and men are wicked because they do not know how to be better, not because their instincts are perverse. In their spirit of pessimism they transform into bad the good things which knock at their door; they do not see them as they really are. The outside world we make for ourselves; it is as we wish it to be. We are the architects of our own life."

The poet does not speak English, but he can read and understand the spoken word. He says that there is an expression heard thousands of times a day in this country; it is on the lips of every American, and is an expressive synthesis of American optimism. This expression is "All right." Everything is "all right" in the United States. In the hotel in which he lives there was a little boy with a bad cold, which caused him to cough at every moment. He asked him: "How are you, little one?"

The boy, with his throat so congested he could hardly articulate a word, replied: "All right." It is this spirit of optimism carried to the extreme limit which should govern the lives of all men, and this philosophy it is that dictates the verses of Amado Nervo, the muse which inspires him as he gets on in life. In his own words: "We should open the windows of our life to the sun and to the light, to heaven and to the stars. We should admire all things that are beautiful and have no vision for what is ugly. By acquiring this practice we learn without effort to be happy."

The poet then recited some poetry to illustrate his dissertation. The first item was called "En Paz." The sonorous voice filled the room and delighted and moved the audience. We give a translation by Dr. Peter Goldsmith, published by Inter-America, together with some details of his life and work by Rinaldo Rinaldini:

EN PAZ.

Artifex vita, artifex sui.

I bless thee, life, near the setting of my sun, at even;
 For never didst thou rob my quickening hope of its leaven.
 Nor tasks too great, nor unmerited pangs hast thou given;
 For I see, at the end of my career, some fruition.
 Since I was the molder of my fate, chooser of my mission.
 If from all things I have learned to draw gall and honey,
 It is because in them I pour both the sweet and bitter;
 When I set out rose-trees, sunbeams soon on rosebuds glitter.
 True, indeed, that after plenty ever will come fasting;
 But thou didst not tell me that May would be everlasting.
 Without a doubt, long have seemed the nights of my slow sorrow;
 Yet thou givest not good nights only; waits still the morrow;
 Then, too, some have been serene; let me not evil borrow.
 I have loved, been loved, and the sun has caressed my brow.
 Life, thou owest me nothing! Life, we are at peace now.

Amado Nervo was born in Mexico—a land prolific in great poets—in the year 1870. Regarding his youth we know a fact that is very important, because it gives us an insight into his soul from an early period. Nervo was once a theological student. He did not complete his theological career, however. Shortly before he was to adopt the habit he gave up the seminary for the world. What reasons induced him to turn aside from his first impulse? Were they the demands of an ardent and restless nature that felt the desire to live beating in its breast with too much strength? Was it because he found in the men of religion the same passions, the same egotisms, the same arbitrariness, as in the men of the world? It is difficult to decide.

What is known is that Amado Nervo, once out of the seminary, devoted himself to a most active life. He left Mexico and went to Europe. He traveled—traveled extensively. He wrote for newspapers and magazines—verses, articles, stories. He took part in every gathering, availed himself of every intellectual opportunity that was offered.

Nervo went everywhere. It could be said that there had suddenly been awakened in him an irresistible curiosity regarding all things and all people. He wrote impassioned compositions, burning with

love, and compositions that, in spite of the sensual tone that animated them, reveal the innate idealism of our poet.

The compositions of Nervo are characterized by an extreme simplicity of form, and by their emotion, the richness of the ideas they contain, and a certain internal rhythm which may be conceived of as the soul of the verse. No poet could have a less forced or affected style. Whether the impression he wishes to convey be tragic, melancholy, or jovial, he does it naturally and always with simplicity.

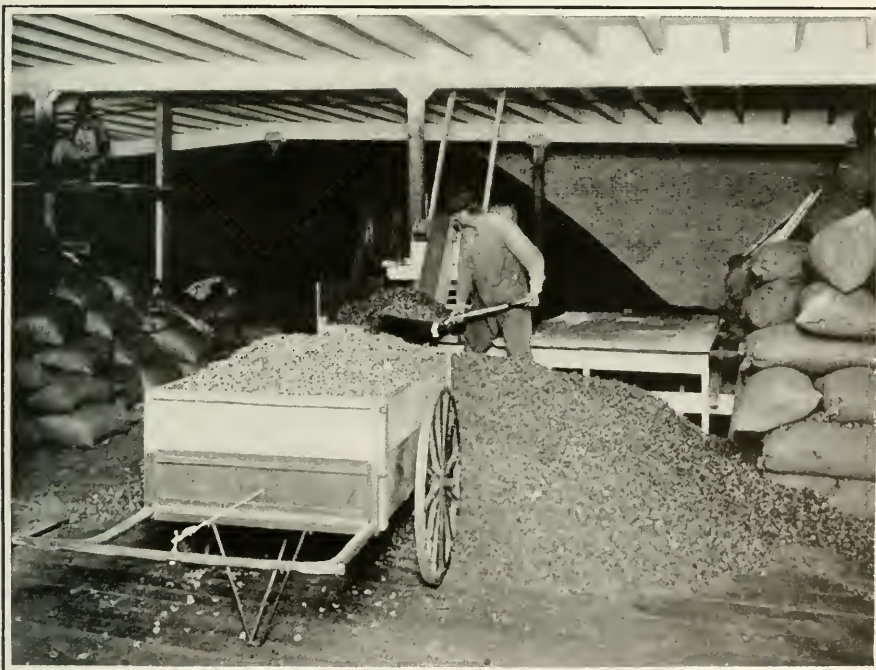
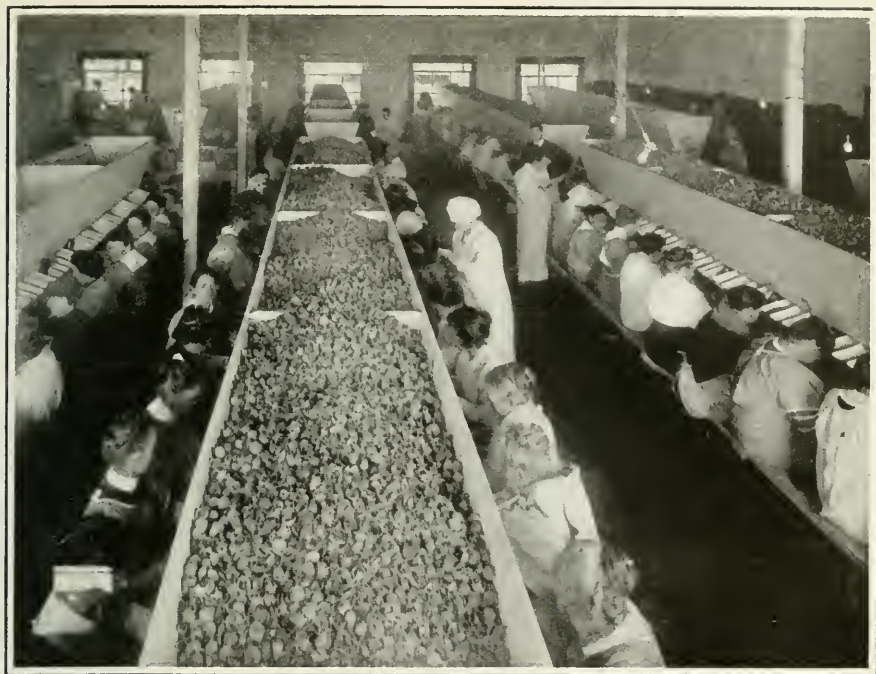
What machinery is doing for the walnut industry.—In the *Scientific American* for January 18, 1919, is an interesting account by Howard C. Kegley of the remarkable growth of a specialized industry largely due to the application of modern mechanical appliances. By the invention of three machines the product of the growers of English walnuts has assumed important proportions in the food market of the United States. Nut-producing trees are found in practically all of the American countries, and Mr. Kegley's article should prove of great interest in sections where the English walnut can be grown, wherefore the following reproduction:

A few years ago when the English walnut growers of California formed a cooperative association, and began marketing their own product, they found a big obstacle in their way. That obstacle was the cull, the underdeveloped, discolored, or scrawny nut. It stood in the way of standardization of two excellent grades. The people had been accustomed to walnuts at 10 cents per pound, and they could not see that any nut was worth more than that. Nut peddlers had been in the habit of buying up quantities of culls, topping them with a few high-grade nuts, and spoiling the market with them.

At the outset the grower's association decided that it would have to eliminate the cull in order to prove to the public that there was something better—something worth at least 20 cents per pound. So the first year of scientific marketing the cull was taken off the market. It had previously been sold at about 5 cents per pound. At the outset the association undertook to crack it and sell the meat for use in candy stores and bakeries. The going was a little slow and the culls did not pan out well the first year, but the first and second quality nuts brought good prices, so the growers counted that they were ahead of the game.

A careful study of conditions and requirements showed that the association needed to get at the cull business on a bigger scale, so the contracts were made to read that all growers had to deliver their entire output of culls to the association storehouses, virtually taking the cull out of the market. Then members of the association invented three machines which did away with hand cracking, provided a method of separating the good nuts from the bad ones, and finally made it possible to extract the last morsel of meat from the shells of the cracked culls.

To-day the walnut grower's association has revolutionized its business to the point where it gets from 20 to 25 cents per pound for number ones and number twos, and sells its nut meats for from 25 to 15 cents per pound. And the singular thing about it is that it can not get enough of the meats to supply the demand. This is due to the fact that the meat of the English walnut grown in the United States is plumper, larger, and whiter than that of the nuts grown in southern Europe. In two years the southern California walnut meats completely crowded the imported walnut meats out of the market in this country.



OPERATIONS IN THE WALNUT INDUSTRY.

Upper picture: The workers separating the meats from the shells as the cracked nuts pass out of the big hoppers upon and along the table chutes beneath. Lower picture: Feeding the shells into the machine which finds the small pieces of meat that the workers have overlooked—fifty dollars' worth a day.

The invention of the three machines used in transforming the cull into an article which is in big demand made it possible to use every bit of the cull for commercial purposes. In the packing houses of Chicago it is said that they extract everything from the pig but the squeal. In the walnut-packing house they equal this performance. Even the shells are sold; they are used in place of corn meal, as a carrying vehicle for dynamite, and the association sells all of its cull shells at \$10 per ton. In the matter of winning the war, it can be seen, the English walnut has done its bit along with other products of the soil which are considered more vital in times of war.

Probably the most important of the mechanical devices used in the walnut cull factory is the cracking machine—a device invented by one of the association members, and sold to the organization. It has a capacity of 5 tons of nuts per day, and four of the machines keep 200 women and girls at work separating the meats from the shells and grading the meats.

This machine has a nut hopper at the top. The nuts drop from holes in the bottom of the hopper into the cylinders, going in one at a time. The cylinders feed them one at a time in between long iron fingers. The finger device is operated by cam wheels. At one stage of the cracking operation the fingers are just far enough apart to admit a walnut with its end perpendicularly. When the walnut has dropped between the fingers until it fits snugly, the cam wheels turn around to the point where their leverage shoves the right-hand set of fingers over against the left-hand set with a quick motion, and that motion exerts just enough energy to snap the shells of the nuts without exercising any slow pressure which would tend to pinch or crush the meats. Then as the cams turn over again, the fingers are allowed to spread apart, and the nuts drop into sacks which are hung over the mouth of the chute below the machine.

The adjustment of the machine is so nearly perfect that it cracks at least 85 per cent of the nuts without injuring the meats in any way. The 15 per cent of damaged meats comes from extra large or unshapely nuts which do not conform to the size of the space between the cracking fingers, and consequently get too much squeeze when the machine is in motion.

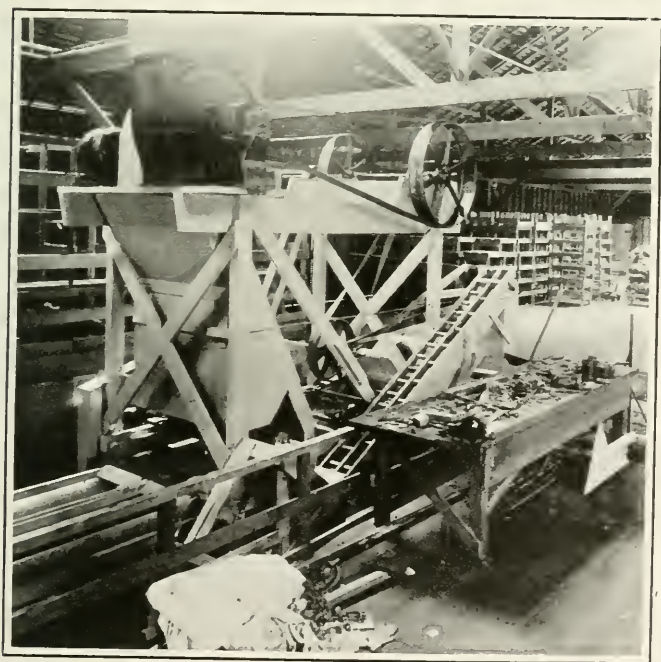
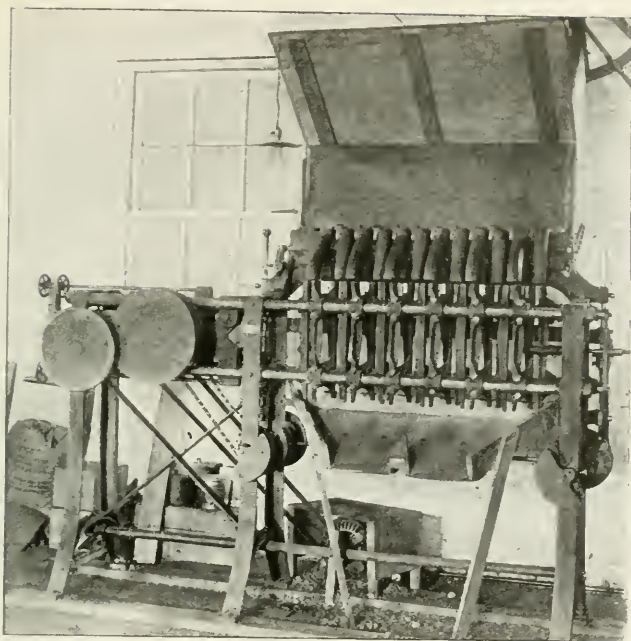
One of the biggest problems that confronted the association when it undertook to separate the culls from the high-grade nuts was that of weeding out the lightweights—the nuts with only one mature half, or those which had shriveled meats or moldy meats, or were otherwise unfit to go into the best grades.

It was necessary to eliminate these inferior nuts in order to establish firmly the quality of the better grades in the open market.

This difficulty was overcome by the use of a vacuum machine invented for that particular purpose. The device works on the principle of the vacuum cleaner, and it lifts from among the high-grade nuts all nuts which are light in weight and therefore of questionable quality. When it has finished its work, the association is reasonably sure that every nut it has left in the two best grades is a sound nut with plump meat.

The nuts are conveyed to the vacuum machine in a narrow elevator at one side of the machine. The elevator belt is pocketed to keep the nuts from piling up and overflowing the elevator track. When they are dumped into a trough at the end of the elevator they are distributed across one end of a sieve, which operates like an endless belt. This sieve conveys the nuts beneath a chute which extends down from the overhead vacuum device. This arrangement exerts just enough suction to pick up all the nuts which are below a certain weight, leaving the heavier nuts of grades one and two to pass to the end of the sieve and glide down a long chute to the packing shed.

The third machine, invented by members of the association to convert the cull into a profitable by-product is the shell separator. This is used to handle the tailings of the mill. After the nuts are cracked and the girls have extracted from the shells all of the meats they can find, there are usually small bits of meat left in some of the shells, and women who are either careless or new at the work frequently overlook choice pieces of meats and sometimes whole halves while working over a pile of cracked nuts.



MACHINERY USED IN A WALNUT FACTORY.

Upper picture: Machine for cracking the nuts. This machine cracks but does not crush the nuts in fact, the adjustment of the machine is so perfect that 85 per cent of the nuts are cracked without injuring the meats in any way. It has a capacity of five tons of nuts per day. Lower picture: Vacuum machine. This machine is for the purpose of separating the good nuts from the bad which it accomplishes by lifting from among the high grade nuts all nuts which are light in weight and therefore of questionable value.

The manager noted that there was considerable waste from that source, so he had a machine built to handle the tailings, and it has resulted in a saving of \$50 worth of broken meats per day since it was put into operation. This device is built on the plan of a small thrashing outfit, and yields a product material which, before the final sifting runs about 80 per cent halves and broken pieces of nut meats and 20 per cent of shell particles.

The walnut grower used to average about 3 cents per pound for his culls and was unable to separate the shriveled meats from the sound ones, so the value of his better grades was depreciated. To-day he gets from 5 to 7 cents per pound for his culls, and the sound nuts sell proportionately higher, because they are of standardized quality. In 1915 the association cracked and sorted nuts by hand and marketed 434,000 pounds. Last year it sold all the meats it could obtain, and this year it is marketing 1,500,000 pounds of culls alone by the by-product system..

AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINA.

FARM INDUSTRY.

The following table, compiled from Argentine official sources, shows areas cultivated and harvested and production of the four principal crops for the last eight years.

WHEAT.

Year.	Area sown.	Area harvested.	Production.
	<i>Hectares.</i>	<i>Hectares.</i>	<i>Tons.</i>
1910-11.....	6,253,180	5,873,913	3,974,520
1911-12.....	6,897,000	6,368,528	4,523,000
1912-13.....	6,918,450	6,701,803	5,100,000
1913-14.....	6,573,540	5,813,856	2,850,123
1914-15.....	6,261,006	5,790,540	4,604,000
1915-16.....	6,645,000	6,328,143	4,600,000
1916-17.....	6,511,000	4,904,634	2,180,401
1917-18.....	7,234,000	(1)	5,973,000

CORN.

1910-11.....	3,215,350	3,215,350	713,000
1911-12.....	3,422,000	3,422,000	7,515,000
1912-13.....	3,830,000	3,830,000	4,995,000
1913-14.....	4,152,000	4,152,000	6,684,000
1914-15.....	4,203,000	4,203,000	8,591,645
1915-16.....	4,017,850	4,017,850	4,093,000
1916-17.....	3,629,570	1,909,950	1,694,600
1917-18.....	(1)	(1)	4,335,000

OATS.

1910-11.....	801,370	663,798	685,542
1911-12.....	1,031,000	850,764	1,004,000
1912-13.....	1,192,400	1,050,322	1,100,000
1913-14.....	1,249,300	926,436	618,395
1914-15.....	1,161,000	869,900	717,000
1915-16.....	1,038,000	900,415	1,095,528
1916-17.....	1,022,000	621,210	464,607
1917-18.....	1,295,000	(1)	1,100,000

¹ Not available.

LINSEED.

Year.	Area sown.	Area harvested.	Production.
1910-11.....	1,503,820	1,267,838	595,522
1911-12.....	1,630,000	1,515,765	572,400
1912-13.....	1,733,330	1,733,000	1,130,000
1913-14.....	1,779,350	1,721,223	938,016
1914-15.....	1,723,000	1,713,750	1,144,090
1915-16.....	1,619,000	1,336,622	895,100
1916-17.....	1,298,000	(1)	(1)
1917-18.....	1,308,600	(1)	568,000

Metric ton = 2,204.6 pounds. Hectare = 2.47 acres.

The exportation of these crops and of bran and flour was as follows:

Year.	Wheat.	Flour.	Bran.	Linseed.	Corn.	Oats.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1911.....	2,285,951	118,486	214,634	415,805	125,185	511,389
1912.....	2,629,956	131,580	325,226	515,399	4,835,237	896,032
1913.....	2,812,149	124,649	274,058	1,016,734	4,806,951	889,744
1914.....	980,525	67,325	230,934	841,590	3,542,280	353,700
1915.....	2,511,514	116,049	177,661	981,192	4,330,594	592,797
1916.....	2,294,876	144,290	29,035	639,914	2,873,910	804,443
1917.....	935,828	112,465	19,872	141,308	893,934	271,713
1918.....	2,943,313	97,241	(1)	391,708	622,427	517,038

In area sown, alfalfa must now be considered the chief crop in Argentina. In 1910-11 this area was 5,400,580 hectares, nearly 1,000,000 hectares less than the area sown in wheat. Three years later alfalfa exceeded wheat in area sown and has exceeded it ever since.

The exportation of hay was: 1913, 32,346 tons; 1914, 21,912 tons; 1915, 18,439 tons; 1916, 27,963 tons; 1917, 6,958 tons; 1918 (three months), 1,147 tons.

Other crops grown, but not exported to any extent, are barley, tobacco, sugar cane, cotton, peanuts, and potatoes. The area sown in barley has about doubled in the last seven years, and in potatoes, nearly tripled.

GRAZING INDUSTRY.

The last agricultural census taken in Argentina was in 1914, which compares with the prior census of 1908 as follows:

	1908	1914
	<i>Number.</i>	<i>Number.</i>
Cattle.....	29,116,625	25,866,763
Horses.....	7,531,376	8,323,815
Mules.....	465,037	565,069
Asses.....	285,088	260,157
Sheep.....	67,211,754	43,225,452
Goats.....	3,945,086	4,325,280
Hogs.....	1,403,591	2,500,585
Chickens.....	15,213,771	24,691,286
Ducks, turkeys, and geese.....	1,507,409	2,114,793

¹ Not available.

Whether there has been an increase, or on the contrary a decrease, in cattle since 1914 is a disputed point. There has no doubt been a considerable increase in sheep and in hogs.

The exportation of meat products for the last eight years is as follows:

Year.	Frozen meats.	Chilled meats.	Preserved meats.	Other meats.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1914.....	398,221	15,066	16,127	12,120	441,564
1912.....	403,456	25,231	18,331	8,824	455,842
1913.....	391,987	31,175	13,014	3,910	443,086
1914.....	403,190	40,690	13,590	2,383	459,853
1915.....	398,116	11,703	32,514	213	442,546
1916.....	482,278	16,153	45,197	1,120	544,748
1917.....	410,455	38,995	142,153	7,613	559,216
1918 ¹	249,486	1,500	87,000	1,477	339,463

Two of the newer industries based upon grazing are butter and cheese.

The following tables show the rapid change of Argentina from an importing to an exporting country with respect to cheese and its growing importance in butter exporting:

CHEESE.

Year.	Exports.	Imports.
	<i>Kilos.</i>	<i>Kilos.</i>
1913.....	7,312	5,045,040
1914.....	3,727	3,834,367
1915.....	6,053	3,313,959
1916.....	227,711	1,421,246
1917.....	2,728,393	312,690
1918 ²	1,633,362	8,007

BUTTER.

1913.....	3,784,396	5,672
1914.....	3,481,657	82,694
1915.....	4,622,676	362
1916.....	5,670,948	320
1917.....	9,830,154	365
1918.....	³ 12,159,823	(⁴)

In 1917 the number of VESSELS engaged in Argentine commerce was 11,202 with a total tonnage of 8,515,385 tons. Of this number 1,324, representing 3,261,435 tons, were employed in the foreign trade, and 9,878, with a tonnage of 5,253,950 tons, were used in the coastwise trade.

During the first eight months of 1918 the number of STEAM AND SAILING VESSELS which entered the port of Buenos Aires was 739. Of this number 250 sailed under the English flag and 38 under the American flag.

¹ First six months.

² First three months.

³ From the ports of Buenos Aires and La Plata alone.

⁴ Not available.

The ELECTRIC LAMP FACTORY in Buenos Aires has a daily capacity of 2,000 globes of the brand known as "Fiat Lux." The only imported part of these lamps is the fine wire or filament used in same.

According to an estimate of the department of agriculture the principal industry of the Province of Santiago del Estero is the exploitation of its FORESTS which, in 1917, produced 1,377,447 tons of firewood, 718,389 red quebracho posts, 344,134 white quebracho posts, and 118,731 ties.

The exports of STOCK PRODUCTS from said Province during the same year consisted of 87,087 oxhides, 571,921 calfskins, 264,953 sheepskins, 20,629 horse and mule hides, 21,338 salted hides, 1,003 tons of wool, 97 tons of bristles, 27 tons of bones, and 7 tons of horns.

The Buenos Aires Railway Co. has acquired an important WOODED ZONE of about 40,000 hectares in the Cerillos district, Department of San Juan, Province of Cordoba.

Arrangements have been made for the experimental cultivation in the Province of Jujuy of the CINCHONA TREE, specimens of which have been brought from the Yungas Valley, Bolivia. Owing to the favorable climatic conditions of the Jujuy region it is confidently predicted that these experiments will be successful.

BOLIVIA.

During the first half of 1918 the EXPORTS OF MINERAL PRODUCTS were as follows: Tin ingots, 24,783,043 kilos, and tin in bars, 262,365 kilos, with a total value of 63,482,176 bolivianos (boliviano = \$0.3893). Copper products, 15,454,825 kilos; copper ingots, 2,223,498 kilos; copper bars, 60,410 kilos; copper tailings, 49,825 kilos; and copper precipitates, 7,099 kilos with a total value of 4,866,510 bolivianos. Wolfram ingots, valued at 5,464,901 bolivianos—Bismuth in bars, 145,323 kilos; in ores, 54,556 kilos; in residues, 40,348 kilos; and in ingots, 21,036 kilos, valued at 2,563,016 bolivianos. Silver ores and tailings, 57,100 kilos, valued at 3,724,894 bolivianos. Antimony ingots, 1,190,909 kilos, valued at 854,300 bolivianos, and lead ores and bullion, 1,574,017 kilos, valued at 587,830 bolivianos. The total value of these products was 81,543,627 bolivianos.

The length of BOLIVIAN RAILWAYS in operation in 1918 was 1,689 kilometers, while those under construction had a length of 571 kilometers, as is shown in detail as follows: Lines in operation: The Antofagasta & Bolivian Railway Co., Antofagasta to Oruro, 486 kilometers; Viacha to La Paz, 29 kilometers; and the Kenko Branch, 8 kilometers, or a total of 523 kilometers. The Huanchaca Bolivia Co., branch of the principal line, Antofagasta, Uyuni, Huanchaca, 38 kilometers. The Bolivian Railway Co., Viacha-Oruro,

202 kilometers; Rio Mulato-Potosi, 174 kilometers; Oruro-Cochabamba, 205 kilometers, and Uyuni-Tupiza to Atocha, 90 kilometers, or a total of 671 kilometers. Electric Light & Power Co., Quillacollo-Cochabamba, 18 kilometers, and Cochabamba-Arani, 60 kilometers, or a total of 78 kilometers. Arica to La Paz Railway, Arica Alto de la Paz, Bolivian section, 233 kilometers. The Peruvian Corporation, Guaquí-La Paz, 98 kilometers. Simón I. Patiño, Machacamarca to kilometer 40.4, Corocoro branch (property of the the State); branch of the main line from Arica, 8 kilometers. The lines under construction were: Simón I. Patiño: Machacamarca-Uncia, 64 kilometers; State railways, La Quiaca-Tupiza, 100 kilometers; Potosi-Sucre, 178 kilometers; La Paz-Yungas, 125 kilometers; Uyuni-Tupiza (nearly completed), 104 kilometers, or a total of 507 kilometers.

A recent executive order frees from license the importation of sugar for ordinary use when made through the customhouses of Villa Bella, Guayaramerin, Cobeja, and Albuna, provided the importation is made in accordance with the customs, rules and regulation now in force.

BRAZIL.

The recent establishment of five COTTON FACTORIES in the city of Sorocaba, State of São Paulo, and the proposed installation of two other factories there in the near future, is evidence of the great development which the cotton industry is undergoing in Brazil. Judging from the area planted to cotton the production in Brazil this year will be very great, and it is proposed to utilize all of the crop in the cotton factories of the Republic.

During the first seven months of 1918 the EXPORTS OF WOOL aggregated 1,065 tons, as compared with 57 tons during the same period of 1917, 91 tons in the first seven months of 1916, 377 tons during the same period of 1915, and 1,654 tons in the same period of 1914. The values of the wool exports referred to in 1918, 1917, and 1916 were, respectively, \$1,243,250, \$48,750, and \$37,550.

According to the Bureau of Commercial Statistics of Brazil the EXPORTS OF WOVEN FABRICS to the Argentine Republic during the months of 1918 following the holding of the Brazilian Exposition of Fabrics in Buenos Aires were, in February, 64 kilos; in May, 16 kilos; in June, 922 kilos; in July, 49,741 kilos; and in August 1,869 kilos, or a total of 52,612 kilos. From the 1st of January to the 31st of August, 1918, Brazil exported to the Argentine Republic, 146,532 empty sacks.

In 1914 the PRODUCTION OF WHEAT in Brazil was 37,154 tons; in 1915, 55,000 tons; in 1916, 84,000 tons; and in 1917, 114,500 tons. Wheat flour and wheat imported into Brazil in 1916 were, respectively, 11,875 and 32,735 tons, as compared with 1,203 tons of wheat flour and 13,306 tons of wheat in 1917.

According to the last census the STOCK on hand in 1907 and 1917, respectively, was as follows: Cattle, 6,199,410 and 8,443,400 head; horses, 805,363 and 1,407,600 head; mules, 143,831 and 351,900; sheep, 2,445,748 and 4,604,000; and goats 53,762 and 138,900.

According to data published by the Department of Agriculture of the United States, Brazil occupies the second place in the world's PRODUCTION OF HOGS, with 17,327,210 head, as compared with 67,766,000 head in the United States which occupies the first place.

During the first eight months of 1918 the EXPORTS OF CACAO were 26,726 tons, as compared with 34,082 tons during the same period of 1917, 26,726 tons in 1916, 27,608 tons in 1915, and 24,213 tons in 1914. The values of these exports were as follows: In 1914, £1,250,000; in 1915, £1,646,000; in 1916, £1,593,000; in 1917, £1,603,000; and in 1918, £1,215,000.

COMMERCIAL RELATIONS WITH FINLAND are soon to be established at Helsingfors through an important commercial organization which proposes to import coffee and other Brazilian products.

There are 202 COTTON FACTORIES in Brazil, with 50,449 looms, 1,500,722 spindles, and 78,186 hands. These factories produce annually products valued at \$6,529,575.

CHILE.

In 1917 the EXPORTS of Chile amounted to 703,500,000 gold pesos, made up of the following items: Nitrates, 475,819,000 pesos, and other products 227,681,000 pesos. Nearly 75 per cent of the exports consisted of nitrates. Among the other products exported were copper ores, bullion, and ingots to the value of 123,000,000 gold pesos, and agricultural and stock products to the value of 67,000,000 gold pesos.

The SOUTH AMERICAN STEAMSHIP CO., which was established in July, 1872, with a capital of 1,500,000 pesos, has increased its capital to 7,500,000 pesos, and its fleet from 5 vessels with a tonnage of 2,400 tons and a value of 700,000 pesos, to 20 vessels, 15 of which have more than 1,400 tons each. The profits of this company, which during the first half of its first fiscal year amounted to 85,260 pesos, gold, were in the first half of 1918, 5,778,868 gold pesos. The company first engaged in the coastwise trade, then extended its operations to Callao, Peru, and later to Guayaquil and Panama, reducing the time between the latter place and Valparaiso to 14 days, including stops at Paita, Salaverry, Callao, Mollendo, Arica, Iquique, and Coquimbo.

A BOTTLE FACTORY has recently been installed at Rancagua, with a daily capacity of 35,000 bottles. The output of this factory will be used largely in supplying the markets of southern Chile.

The COMMERCE OF CHILE with Argentina, Bolivia, Brazil, Cuba, Ecuador, Panama, Peru, and Uruguay amounted to \$3,445,278 pesos, consisting of imports, 63,912,507 pesos, and exports, 19,532,771 pesos. Chile imported from Peru merchandise valued at 27,880,195 pesos, and from the Argentine Republic 21,046,867, and exported to Peru, 4,275,349 pesos, and to Argentina, 3,653,122 pesos.

COLOMBIA.

Congress has enacted a law authorizing an extension of eight years from February 18, 1919, in which to complete the construction of the PACIFIC RAILWAY in accordance with the contracts of December 30, 1905, and January 23, 1908, and upon request to aid the company in obtaining a loan up to \$10,000,000. The Government stipulates that the company shall construct at once a suitable station at Port Buenaventura, together with warehouses large enough to meet the demands of traffic. The railway is to maintain facilities for the loading and unloading of coal intended for export, reduce the freight rate 1 centavo, gold, per kilometer per ton on coal shipped abroad, and grant permission to the Government of the Department of Valle to establish in or near Buenaventura coaling stations, the railway to supply same with the necessary rolling stock.

The EXPORTS OF GOLD, platinum, and silver from the port of Barranquilla in 1917 amounted to \$4,034,317.

During the first 10 months of 1918 the Porce division of the ANTIOQUIA RAILWAY transported 1,111,749 passengers, as compared with 1,290,741, and 1,141,060 during the entire years of 1917 and 1916.

A factory for the manufacture of SOLE LEATHER has been established at Cienagas, Department of Magdalena.

The new RAILWAY STATION of the Antioquia Railway at Medellin was recently completed.

The mint at Medellin has imported from the United States an ELECTROLYTIC OUTFIT of a capacity sufficient to coin all the gold required by that establishment.

The Department of Antioquia has 8,926,000 COFFEE TREES in bearing, most of which are in the districts of Pueblo Rico, Jerico, Salgar and Montebello.

Reports from Barraca Bermeja are to the effect that the Tropical Oil Co. has encountered an OIL GUSHIER at Anfantas, near the Colorado River a branch of the Opon River. The well has been capped until transportation difficulties caused by the war improve to such an extent as to permit the bringing in of machinery for refining the oil and the material needed for conveying it to the Magdalena River from whence it can be placed on the market. In the meantime prospecting continues in this zone.

COSTA RICA.

The steamer *Hardcastle* recently brought to the port of Almirante a large quantity of drilling machinery for use in the exploitation of the PETROLEUM INDUSTRY. The Sinclair interests propose to simultaneously drill two wells, one at Uscari, Province of Talamanca, and the other on Colon Island, Republic of Panama. These places were selected after careful investigation by a number of experienced geologists who believe that petroleum exists in the territories referred to in paying quantities.

According to data compiled by the Department of Statistics of the Costa Rican Government, the EXPORTS OF COFFEE from the 1917-18 crop amounted to 161,108 sacks, weighing 11,451,719 kilos, valued at 7,964,794 colones (colon = \$0.4653).

CUBA.

Data published by the Secretary of Agriculture shows that the production of SUGAR in Cuba in 1916-17 was, in round numbers, 3,000,000 tons, as compared with 3,500,000 tons in 1917-18. The proportional increase per province was as follows: Pinar del Rio, 4.79 per cent; La Habana, 10.18 per cent; Matanzas, 9.20 per cent; Santa Clara, 6.79 per cent; Camaguey, 44.88 per cent, and Oriente 24.16 per cent.

At the close of 1918 an arrangement for taking over the SUGAR CROP of Cuba, amounting to, approximately, 4,000,000 tons, was made in New York between the Cuban committee appointed for that purpose and the United States board for regulating the price of sugar in the United States.

A PUBLISHING COMPANY, with a capital of \$300,000, was recently organized in Habana for the purpose of publishing the best works of Cuban writers, and has already commenced operations.

During the fiscal year 1917-18 the FOREIGN COMMERCE of the Republic, including imports and exports of coin, amounted to \$672,655,114, of which \$370,481,762 were exports and \$302,173,352 were imports. These figures, compared with those of 1916-17, show an increase of \$13,441,979 in the exports and \$54,238,097 in the imports.

IMPORTS AND EXPORTS OF COIN in 1917-18 amounted to \$5,622,978 and \$2,780,049, respectively. In the previous year these imports and exports were \$26,545,455 and \$24,708,200, respectively.

ECUADOR.

According to the Bulletin of the Board of Trade and Agriculture of Guayaquil the exports of cacao from that port have largely increased since the signing of the armistice. In November last these exports consisted of 46,326 sacks, weighing 3,521,712 kilos, as compared with

20,201 sacks in October, and 13,923 sacks in September, 1918. The EXPORTS OF CACAO in November, 1918, were larger than those of the same month of 1917, 1916, 1915, and 1914. The shipments of cacao to Japan in November last aggregated 16,000 sacks, and marks the beginning of commercial relations in this product between Japan and Ecuador.

DOMINICAN REPUBLIC.

The work of installing a SUGAR CENTRAL at Barahona by a Puerto Rican company, which proposes to invest \$10,000,000 in the enterprise, is underway. A considerable part of the level area of the province will be used, and especially the greater part of the rich Neyba valley. At the present time 1,500 workmen are engaged in clearing the land and in other necessary labors. Irrigation works, the water supply for which will be taken from the Yaque del Sur River, have also been commenced. It is proposed to make this central one of the largest in the Antilles.

Manuel Bermudez has installed in Duarte Avenue, Santiago de los Caballeros, a large STILL, which now produces alcohol of 43°. A four-story building has been erected for this installation.

HONDURAS.

Early in the month of February a recently constructed United States ship visited the Pacific coast of Central America with the object of aiding in a COMMERCIAL PROPAGANDA. The vessel is supplied with samples of the manufactured products of the United States.

MEXICO.

The EXPORTS OF SILVER from January to May, 1918, aggregated 716 tons. The total silver exports during the year 1918 are estimated at 1,720 tons.

In 1918 the COAL mined in the Republic amounted to, in round numbers, 600,000 tons.

In September, 1918, there were 282 PETROLEUM wells in Mexico, having a daily potential production of 200,000 cubic meters, and an actual production of about 12½ per cent. At the time referred to 125 wells were in operation, and places had been selected in which to open 114 more. The 19 oil companies of the Republic operated over an extent of 1,130 kilometers. In 1918 Mexico produced petroleum to the amount of 58,560,553 barrels, or at an average rate of 160,440 barrels per day.

Angel J. Lagarde, director of the Government's commercial agency, has been appointed COMMERCIAL DELEGATE to the principal countries of South America. Mr. Lagarde will negotiate with South American Governments with the object of increasing their commerce with Mexico.

Of the 12,000 tons of PERUVIAN SUGAR contracted for by a Mexico importing house, 3,000 tons arrived in the Republic in January last.

Great activity has recently been noted in the MINING industry of Mexico, and especially in the border States. It is stated that the American Smelting & Refining Co. proposes to expend \$8,000,000 on its smelting and refining plants situated in various parts of the country, and more than 8,000 workmen are to be given employment immediately in the company's smelters at Azarco, Velardeña, and Aguas Calientes.

The San Rafael PAPER FACTORY has again actively begun operations, and it is hoped that before the end of the present month enough paper will be available to meet the demands of the Republic.

On lands adjoining the Technical & Industrial Museum in the City of Mexico an EXPERIMENTAL LABORATORY has been installed, in which analyses of numerous natural products will be made in order to determine their industrial application and value. Many of these products are not now utilized because their worth and application are at present unknown. One of the first things it is proposed to study is the employment of the maguey fiber in the manufacture of paper.

The Government of the United States has authorized a number of petroleum companies to export UNITED STATES GOLD to Mexico.

NICARAGUA.

Congress has approved a contract authorizing George Heinsch to prospect for OIL and natural gases in Nicaragua and to exploit the same. Denouncements of oil lands are to be made in accordance with the provisions of the Mining Code, and the deposits discovered may be exploited for 90 years. Authority is given to establish refineries in the Republic. The Government is to receive 10 per cent of the gross products extracted during the life of the concession.

The Government has granted for a term of 50 years to Montealegre Seydel the small Aseradores Island, in the Department of Chinandega, for the purpose of raising fine HOGS and other blooded animals.

The logging and LUMBER INDUSTRY has been formally established in the Department of Carazo. A number of Managua merchants, who are practical lumbermen, have gone into that region with the object of buying cabinet woods, which are found in that vicinity in great abundance, although dyewoods are scarce in that part of the country.

PANAMA.

The Government has granted to Henry DeJan authority to exploit for five years in the national lands of the Province of Bocas del Toro the milk or sap of the "sapota" tree with the object of manufacturing

therefrom CHICLE GUM. The concessionaire agrees to use scientific processes in carrying on this industry so as not to destroy the trees tapped, and furthermore binds himself to pay the Government of Panama 1 centavo per pound of product obtained.

PARAGUAY.

A joint STOCK COMPANY entitled "La Rural Española" (Spanish Rural Co.), with a capital of 600,000 pesos, has been organized in Asuncion for the purpose of engaging in the STOCK INDUSTRY. The company proposes to purchase and sell lands, ranches, and stock, and to give especial attention to lands suitable to the development of the cattle industry, to engage in the manufacture of extracts of meats and the installation of meat-packing plants.

PERU.

The Huaron Mining Co. has been authorized to build within the next two years a 0.75 meter gauge RAILWAY from Shelby, on the Oroya to Cerro de Pasco line, to the San Jose smelter near the village of Huayllay.

Since the outbreak of the European war the SUGAR production in Peru has greatly increased, the average annual output having risen from 185,000 tons during the period from 1910 to 1914, to 250,000 tons in the period from 1914 to 1917. In 1916-17 the output was more than 280,000 tons. It is estimated that of the million acres of fine sugar-cane land in the Republic, only about 100,000 are planted to cane. An effort is being made, however, to increase the area planted. The sugar-producing season in Peru is from October to February, and most of the output is brown sugar having a polarization of 96 or more, which makes it in great demand by refiners.

SALVADOR.

In 1917 the imports of VEGETABLE OILS for food purposes aggregated 63,271 kilos, while the imports of other oils amounted to 328,244 kilos, or a total of 391,515 kilos.

Within the last few years the TRADE BETWEEN JAPAN AND SALVADOR has considerably increased. The imports from Japan in 1914 consisted of 17,358 kilos of merchandise valued at \$97,413, American gold; in 1915 the imports were 23,962 kilos, valued at \$56,038; in 1916, 124,685 kilos, valued at \$113,685, and in 1917, 231,239 kilos, valued at \$211,830. Raw material for the manufacture of fabrics was also obtained from Japan, as were toys and playthings formerly purchased from Germany. The principal articles imported were cotton thread and manufactures of cotton, china-ware, notions, ties, and hardware.

URUGUAY.

The foreign commerce of Uruguay for the first nine months of 1918 (January to October) amounted to: Imports, 26,635,622 pesos (\$27,567,869); exports, \$2,060,234 pesos (\$84,932,342). Compared with the like period of 1917 there was a decrease in imports of 1,317,-175 pesos and an increase in exports of 8,361,179 pesos. The chief trade was with the United States, imports, \$6,533,612; exports, \$19,031,628; followed by Great Britain, imports, \$3,405,957, exports, \$20,529,243; Spain, imports, \$1,764,784, exports, \$14,317,781; Argentina, imports, \$7,142,807, exports, \$6,334,738; France, imports, \$1,000,220, exports, \$12,414,478; Brazil, imports, \$6,732,439, exports, \$3,543,480; Italy, imports, \$496,040, exports, \$8,854,654. The trade with Argentina is largely a transit trade. The chief imports from Brazil are coffee and sugar.

The values above given on the import side are all customhouse statistical valuations. The true commercial values, as estimated by the director of the Boletín del Ministerio de Hacienda, Dr. Eduardo Acevedo Alvarez, were nearly 79 per cent greater than the statistical valuations of imports as given above for the year 1918. Thus the figure of 26,635,622 pesos for imports for nine months represents a commercial value of 47,651,128 pesos.

Some of the principal classes of articles were: Food products, 5,826,000 pesos; tobacco, 407,000 pesos; dry goods and notions, 3,137,000 pesos; steel and iron products and industrial materials, 3,250,000 pesos; lumber, 579,000 pesos; fuels, 1,765,000 pesos; leather, 45,000 pesos.

The principal exports were: Cattle on the hoof, 862,800 pesos; sheep on the hoof, 86,000 pesos; horses, 17,000 pesos; beef and other meats, frozen or preserved, and meat extracts, 29,700,000 pesos; tallow and animal oils, 3,800,000 pesos; wool, 27,053,000 pesos; hides and skins, 16,400,000 pesos; hair, 125,000 pesos; bones and hoofs, 121,000 pesos; agricultural products, grains, fruits, hay, etc., 3,072,000 pesos; stone and sand, 198,000 pesos.

The latest live-stock census of Uruguay was taken in 1916. At this time there were 7,802,442 cattle, 11,472,852 sheep, 303,958 hogs, and 567,154 horses.

The Boletín del Ministerio de Hacienda for September, 1918, publishes the figures on the number of cattle, sheep, and hogs slaughtered in Uruguay for the eight months from January 1 to September 1, 1918, in comparison with the like periods of the four preceding years, as follows:

	1914	1915	1916	1917	1918
Cattle.....	489,917	591,663	575,717	769,642	752,091
Sheep.....	206,292	224,055	187,159	167,377	151,704
Hogs.....	18,589	17,235	20,375	32,171	35,358

For the last five years the area sown in hectares (2.47 acres), and the production in metric tons (2,204.6 pounds) of the five principal agricultural crops of Uruguay are shown in the following table:

	1914	1915	1916	1917	1918
Wheat:					
Area.....hectares.....	368,846	316,962	384,290	315,549	394,949
Production.....tons.....	160,227	97,855	268,543	146,697	355,443
Linseed:					
Area.....hectares.....	51,893	40,923	17,863	14,525	14,725
Production.....tons.....	24,451	14,938	9,921	3,096	8,467
Maize:					
Area.....hectares.....	280,234	318,501	281,994	253,836	(1)
Production.....tons.....	181,422	289,108	116,942	173,109	
Oats:					
Area.....hectares.....	39,431	33,149	42,518	57,284	66,863
Production.....tons.....	26,853	13,545	23,138	27,959	53,655
Barley:					
Area.....hectares.....	5,685	2,113	3,924	5,135	2,357
Production.....tons.....	3,584	861	2,512	2,401	2,341

(1) Unavailable.

VENEZUELA.

The only Venezuelan packing plant for the preparation of chilled meats is located at Puerto Cabello and belongs to an English syndicate. This syndicate obtained a concession from the Venezuelan Government in 1907 authorizing it to prepare and export chilled meats for a period of 15 years. The exports of meat by this company, which commenced in 1910, were later discontinued and were not resumed until the outbreak of the European war, at which time the plant was enlarged. This PACKING PLANT has a daily capacity for handling 500 head of cattle, and is provided with storage facilities for 6,000 tons of chilled meats. At present from 400 to 500 workmen are employed. According to data compiled by the customs officials, the exports of meats from this plant, in metric tons, from 1910 to the first nine months of 1918, inclusive, were as follows: 1910, 1,330 tons, valued at \$114,626; 1911, 1,800 tons, valued at \$104,281; 1912, 697 tons, valued at \$27,910; 1915, 3,579 tons, valued at \$270,461; 1916, 3,315 tons, valued at \$322,499; 1917, 5,508 tons, valued at \$425,249; and in the first nine months of 1918, 4,072 tons, valued at \$314,161. No exports were made in 1913 and 1914. From August 5, 1911, to March 8, 1917, 89,025 head of cattle and 1,105 hogs and goats were slaughtered. From August 14, 1916, to August 14, 1917, 27,000 head of cattle were slaughtered, and during the same period of 1917-18, 32,000 head. It is estimated that 40,000 head will be slaughtered in 1918-19.

For many years the production of SUGAR in Venezuela was limited to the manufacture of raw sugar for domestic consumption. In 1916 the raw sugar exported from Maracaibo amounted to 3,500,000 pounds, or about double the quantity exported in 1915. In 1914 the sugar industry of Venezuela was further developed by the estab-



ARMISTICE CELEBRATION AT LA PAZ, BOLIVIA.

lishment of a number of sugar centrals near Lakes Maracaibo and Valencia. Sugar from these centrals is about 97 per cent pure and is exported to the United States, 2,000,000 pounds having been shipped to that country in 1915, 15,000,000 in 1916, and 25,000,000 in 1917. It is claimed that Venezuela produces more cane to the acre than any other sugar-cane-producing country.

The NATIONAL EXPOSITION OF AGRICULTURE will be held in Caracas from March 16 to April 30, 1919.

ECONOMIC AND FINANCIAL AFFAIRS

ARGENTINA.

During the war Argentina increased its store of gold by about 50 per cent. Estimates made by the conversion office (caja de conversión) are as follows:

	Pesos.
1913.....	294, 934, 755
1914.....	274, 668, 964
1915.....	332, 557, 899
1916.....	350, 179, 783
1917.....	373, 909, 545
1918.....	436, 000, 000

In each case the estimate is of December 31, except for 1918, when it is of November 30. The Argentine gold peso in United States values is worth 96.48 cents, so that the 436,000,000 pesos represents nearly \$421,000,000 United States.

The bulk of Argentine gold is held by the conversion office as guaranty for the national paper circulation. The amount of gold so held and the circulation for the six years was:

	Gold.	Paper circulation.	Proportional guaranty.
	<i>Pesos.</i>	<i>Pesos.</i>	<i>Per cent.</i>
1913.....	233, 197, 716	823, 263, 045	72.6
1914.....	221, 405, 298	803, 820, 275	63.5
1915.....	305, 636, 048	987, 645, 615	67.1
1916.....	316, 835, 326	1, 013, 098, 518	71.0
1917.....	316, 852, 151	1, 013, 136, 757	71.0
1918.....	379, 032, 643	1, 154, 454, 051	74.6

The guaranty is on the issue and redemption value of the paper peso at 44 per cent of its face value in gold (i. e., the paper peso has a value

fixed by law, at which value it circulates and is redeemed in gold of 100 pesos paper, equal to 44 pesos gold). The guaranty is of its redemption value, which for the outstanding circulation on November 30, 1918, of 1,154,454,054 pesos, amounts to 507,959.784 pesos, of which the gold reserve is 74.6 per-cent.

Deducting the amount held by the conversion office from the estimate first given of 436,000,000 pesos gold, there remains in Argentina, available for commercial purposes, without any contraction of the paper currency, a stock of about 56,000,000 pesos gold, equivalent in United States values to about \$54,000,000.

The changes in the public debt of Argentina occurring during the war are shown in the following statement:

	Consolidated debt.	Floating debt.
	<i>Pesos, paper.</i>	<i>Pesos, paper.</i>
1913.....	1,238,004,134	None.
1914.....	1,238,689,704	140,610,545
1915.....	1,221,779,159	276,735,565
1916.....	1,242,472,512	377,892,999
1917.....	1,353,205,453	439,258,754
1918 (Aug.).....	1,241,899,612	572,656,992

The figures for 1918 are given on the authority of Dr. Juan B. Beltran, editor of *Revista de Economía y Finanzas* of Buenos Aires.

Both the consolidated and the floating debts above are reduced for uniformity to paper peso values, the value of the peso being approximately 42½ cents United States (\$0.424512).

Banking operations in Argentina are carried on in both gold and paper, the two being kept separate. The following statement shows bank capital (available in Argentina), deposits (on current account, on time and savings), and loans (discounts and advances) from 1913 to 1918. The statement for the last year is of November 30; for all other years of December 31.

GOLD.

	Capital.	Deposits.	Loans.
1913.....	61,048,190	36,131,879	28,733,339
1914.....	33,548,190	27,980,850	13,993,982
1915.....	34,795,190	16,374,659	9,580,081
1916.....	36,461,856	14,683,753	9,498,119
1917.....	36,340,423	15,812,809	6,372,900
1918.....	47,861,844	11,204,608	5,002,797

PAPER.

	Capital.	Deposits.	Loans.
1913.....	374,670,352	1,381,397,386	1,745,514,784
1914.....	372,374,090	1,178,450,788	1,163,747,939
1915.....	341,591,415	1,431,906,478	1,220,199,382
1916.....	341,982,924	1,623,886,469	1,295,449,120
1917.....	341,087,703	1,977,843,344	1,539,056,512
1918.....	349,952,015	2,802,714,586	1,813,535,538

It will be noticed that between December 31, 1913, and November 30, 1918, there was a withdrawal of gold deposits in banks of nearly 25,000,000 pesos and a curtailment of gold loans of 23,730,000 pesos. At the same time the total stock of gold in the country went up over 140,000,000 pesos, the conversion office itself increasing its holdings by nearly 146,000,000 pesos.

Within the same period paper deposits increased by 1,420,000,000, or more than doubled, while paper loans increased by only 68,000,000 pesos. These figures show conclusively the great banking strength of Argentina at the close of the war.

The principal banks with deposits, in round numbers, gold and paper pesos, as of November 30, 1918, are:

	Gold.	Paper.
Bank of Argentine Nation.....	3,200,000	1,183,100,000
British Bank of South America.....	600,000	65,900,000
German Trans-Atlantic.....	1,100,000	37,800,000
German Bank of South America.....	300,000	25,700,000
Spanish Bank of Rio de la Plata.....	600,000	261,900,000
Bank of Province of Buenos Aires.....	900,000	270,100,000
French and Italian Bank.....	40,000	61,300,000
London and Rio de la Plata.....	1,900,000	173,400,000
New Italian.....	200,000	73,800,000
London and Brazil.....	200,000	25,700,000
Italy and Rio de la Plata.....	1,100,000	129,700,000
Italo-Belgian.....	40,000	40,200,000
Galicia and Buenos Aires.....		25,700,000
Popular Argentina.....	200,000	69,600,000
Anglo-South American.....	500,000	5,000
National City Bank (of New York).....	5,000	66,600,000
Italian Commercial.....	700,000	31,400,000
Holland Bank of South America.....		56,200,000
First National of Boston.....	308,000	60,100,000

In United States values, as above stated, the value of the gold peso is \$.9648, and of the paper peso \$.424512.

During the first nine months of 1918 the Argentine CUSTOMS COLLECTIONS amounted to 53,184,250 gold pesos, as compared with 36,690,284 pesos in the same period of 1917.

The EXPENSE BUDGET of 1918, as finally agreed upon by congress, amounts to 391,035,571 pesos, currency, made up of the following items: Congress, 4,598,156; department of interior, 46,764,812 foreign relations, 4,304,850; treasury, 19,549,262; public debt, 126,445,894; justice, 12,904,946; public instruction, 57,626,228; war, 29,119,338; navy, 22,779,676; agriculture, 9,206,520; public works, 10,426,015; pensions, 16,821,473 public constructions, 19,395,000; and subsidies 11,093,401.

CHILE.

The following data show the satisfactory FINANCIAL CONDITION of the Republic: The receipts, which in 1914 amounted to 161,328,664 pesos, currency (paper peso = about \$.19), and 60,000,000 pesos, gold (gold peso = \$.365), rose in 1917 to 227,498,751 pesos, currency, and 100,000,000 pesos, gold. The expenditures of the

Government in 1914 were 222,757,939 pesos, currency, and \$5,674,326 pesos, gold, as compared with 294,865,454 pesos, currency, and 26,-247,437 pesos, gold, in 1917. The foreign debt, which on December 31, 1914, amounted to 449,416,206 pesos, gold, was 413,922,400 pesos, gold, on the same date of 1917. The internal debt of December 31, 1914, amounted to 155,722,335 pesos, gold, and 33,398,871 pesos, currency, and on the same date of 1917 to 157,589,200 pesos, gold, and 76,839,019 pesos, currency. The gold conversion fund amounted on December 31, 1914, to 108,160,754 pesos, and on the same date of 1917 to 94,144,558 pesos. The customs duties, which in 1914 aggregated \$1,316,764 pesos, currency, amounted to 79,598,240 pesos, currency, in 1917. The export duties in 1914 were 49,911,113 pesos, gold, and 33,391,494 pesos, currency, as compared with 53,337,580 pesos, gold, and 77,123,881 pesos, currency, in 1917. The value of imports, which in 1914 were 269,756,699 pesos, gold, rose in 1917 to 355,077,027 pesos, gold. The value of exports in 1914 were 299,675,-435 pesos, gold, as compared with 712,289,028 pesos, gold, in 1917.

COLOMBIA.

A recent executive decree adds to the national expense budget now in force the sum of \$100,000 to be used by the Tolima Railway in construction work.

Reports from Bogota are to the effect that the Government proposes to contract a LOAN in the near future to the amount of \$4,-000,000. Of the proceeds of this loan \$125,000 are to be used in rebuilding the customhouse at Barranquilla, \$24,000 in the payment of the first installment for the construction of houses for workmen, and \$75,000 in improving the customs coast guard service.

An executive decree of December 11, 1918, orders the issue of the COLOMBIAN INTERNAL DEBT BONDS, authorized by laws 23 and 58, of 1918, to the amount of \$3,675,000. These bonds bear interest at the rate of 9 per cent, and the proceeds of same are to be used in the payment of the expenses of the Government and of debts contracted by the Government.

CUBA.

The receipts for CONSULAR FEES in the fiscal year 1917-18 amounted to \$1,007,207, or \$208,755 more than in 1916-17.

The PUBLIC REVENUES of the country collected from March 1 to September 30, 1918, amounted to \$37,404,374, made up of customs revenues, \$21,959,575; tax on loan, \$2,205,142; national stamp tax, \$2,689,368; lottery, \$2,335,728; and consular fees and other receipts, \$8,214,561. On October 1, 1918, the cash on hand was \$5,431,233.

On August 31, 1918, the FOREIGN DEBT amounted to \$52,874,500, consisting of the first Speyer loan (1904) \$26,374,500; second Speyer loan, 4½ per cent (1909), \$16,500,000; and the Morgan loan, 5 per cent, \$10,000,000. The revolutionary bonds have been paid in full, and on the first Speyer loan, which amounted to \$35,000,000, payments had been made up to the date mentioned of \$8,625,500.

The NATIONAL DEBT, up to August, 1918, totaled \$30,731,900, as follows: Fifty per cent of the annual payments of the liberating army, \$10,568,500; issue of 1917, series A, 6 per cent, \$5,000,000; bonds, series B, 6 per cent, circulating, \$6,863,400; loans arranged, \$1,800,000; issue of \$7,000,000, less payment of \$500,000, \$6,500,000. The foreign and interior debts continued amount to \$83,606,400.

From April 1 to November 2, 1918, eleven INSURANCE COMPANIES have been authorized to do business in the Republic, and 185 mercantile corporations and companies, representing a paid-up capital of \$242,448,000, were registered in Cuba.

COSTA RICA.

The President of the Republic has ordered that EXPORT BILLS up to \$500,000 be issued and deposited in the National Bank of Costa Rica, to be exchanged by said bank, upon the payment of their value, for foreign exchange, to be issued in payment of the export tax imposed upon lumber, manganese, hides, rubber, silver bullion, refined and raw sugar, and other articles mentioned in article 1 of the law of June 30, 1917.

The National Bank of Costa Rica has been authorized to issue 8,998, BANK BILLS of the denomination of 100 colones each (colon = \$0.4653).

DOMINICAN REPUBLIC.

According to the annual report of the general receiver of customs the CUSTOMS REVENUES collected in 1917 aggregated \$2,455,784. The Government also collected an additional amount of internal revenue during the same year of \$1,226,446. At the close of 1917 the Government treasury had a surplus of \$1,542,960, as compared with \$3,097,533 on August 31, 1918.

In November, 1918, the CUSTOMS REVENUES of Puerto Plata from imports, exports, tonnage dues, and port charges amounted to \$128,451.

The Government has ordered printed 30,000,000 internal REVENUE STAMPS of the denomination of one-fourth of a centavo.

HAITI.

A law of the council of state, ratified by the President of the Republic, fixes the NATIONAL BUDGET of receipts and expendi-

tures for the fiscal year 1918-19 at 3,999,646 gourdes and \$3,057,803. The expenditures are made up of the following items: Department of foreign relations, 48,240 gourdes and \$87,973; treasury and commerce, 649,530 gourdes and \$11,949; interior, 491,049 gourdes and \$1,204,191; public works, 226,900 gourdes and \$464,730; agriculture, 37,872 gourdes and \$8,288; public instruction, 1,490,691 gourdes and \$41,116; justice, 842,180 gourdes and \$35,772; worship, 40,680 gourdes and \$59,850; bank, 59,696 gourdes and \$45,639; expenses collector general's department, 95,850 gourdes and \$148,717; and public debt, 16,958 gourdes and \$949,578.

MEXICO.

During the period comprised between September 1 and May 31, 1918, the PUBLIC REVENUES collected amounted to 102,590,000 pesos, of which 33,400,000 pesos were customs revenues and 69,190,000 pesos stamp taxes.

From December, 1916, to July, 1918, the MINTAGE amounted to 93,900,000 pesos, a sum without parallel in the coinage of money in the Republic. From February 11 to July 30, 1918, the money coined amounted to 26,000,000 gold pesos and 440,000 pesos in silver coins. This is larger than the coinage of the period from 1909 to 1915. The smelting and assay tax produced about 6,000,000 pesos.

With the object of fixing the amount of CLAIMS which should be recognized by the Government for damages caused by the Revolution, and in order to determine the amount which should justly be paid, a new indemnity committee has been formed and has commenced work.

At the close of 1918 the RAILWAY SYSTEM OF MEXICO consisted of 25,672 kilometers of line, of which 4,840 were under the jurisdiction of the State.

In the economic year from September 1, 1917, to August 31, 1918, the RAILWAY RECEIPTS for freight and passengers amounted to 42,836,619 pesos. The excess of railway receipts over expenditures in December, 1918, was 1,552,000 pesos.

The value of PROPERTY REGISTERED in the federal district during the past year was 98,932,544 pesos.

NICARAGUA.

At the close of 1918 the MONEY IN CIRCULATION in the Republic amounted to 2,960,000 cordobas (cordoba=\$1). In addition to this sum the guarantee fund on deposit in New York on the date mentioned was \$1,300,000.

The amount of REVENUES FROM TOBACCO and aguardiente during the first half of 1918 was 438,768 cordobas.

PERU.

The four banks in Lima which participated in the £3,000,000 BOND ISSUE recently made by the Peruvian Government have been authorized to open accounts in the London & Midland Bank, Lloyds Bank, and the London County Westminster Bank for the sum of £600,000, to be used in meeting the drafts of exporters as well as those who deliver drafts to the Peruvian Treasury.

The Executive power has ordered that the EXPORT DUTIES ON TUNGSTEN be arrived at by taking as a basis the average of the highest and lowest quotations of wolframite in the New York market.

A law of December 14, 1918, authorizes the President of the Republic to contract a loan of £300,000, bearing interest at the rate of 7 per cent per annum. Provisions are made for payment by lot at par and for an annual accumulative sinking fund of 1 per cent. The proceeds of the loan are to be used in the construction of the JATUNHUASI RAILWAY.

SALVADOR.

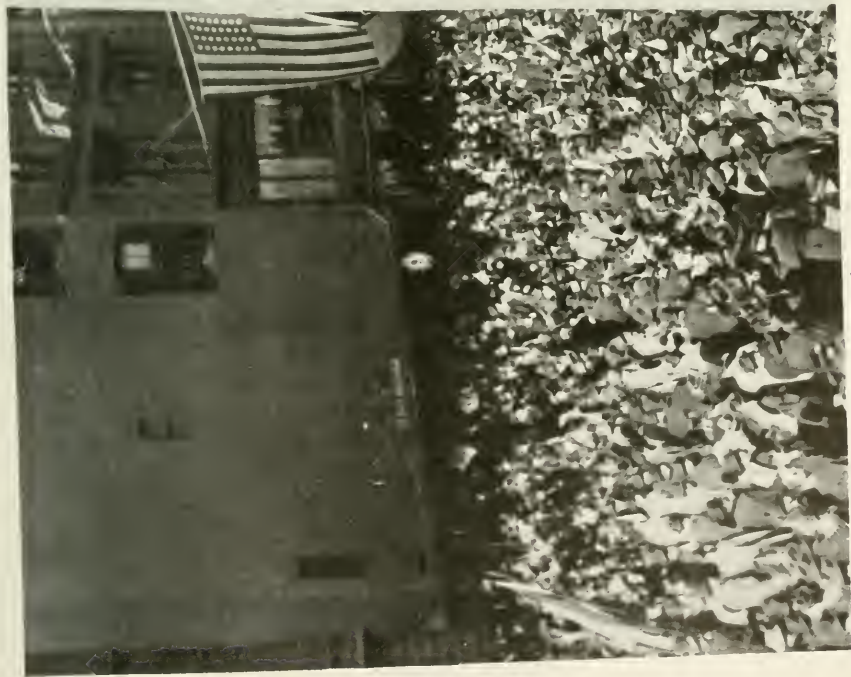
The Executive power has authorized the SALVADORIAN BANK to increase its capital to 3,500,000 silver pesos (silver peso = \$0.7234), divided into shares of 100 pesos each, and to issue bank bills payable to bearer and redeemable in silver legal tender coin.

For the purpose of avoiding confusion in distinguishing the BANK BILLS of the three banks of issue of the Republic, the bills of which at the present time have the same colors for the different denominations, the President of the Republic has decreed that the next issue of bank notes of said banks shall be issued in denominations of different colors, as follows: 500 pesos denomination, old gold or yellow; 100 pesos, olive; 50 pesos, ocher; 25 pesos, purple; 10 pesos, dark gray; 5 pesos, green; 2 pesos, blue; and 1 peso, red.

VENEZUELA.

In accordance with the law enacted by Congress in June, 1918, the President has ordered the COINAGE OF SILVER referred to in said law, in pieces of 5, 2, 1, 0.50, and 0.25 bolivares, representing a total value of 5,300,000 bolivares.





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NEW YORK CELEBRATES THE VICTORY.

On Monday, November 11, 1918, the authentic news reached New York that Germany had signed the armistice and thereby ended the greatest war in history. Great crowds collected and processions of cheering thousands paraded through the streets to give vent to their enthusiasm. On Fifth Avenue all vehicular traffic ceased and the people filled the streets for many squares. The above photograph shows the crowd collected in front of the Union League Club.



INTERNATIONAL TREATIES

On November 14, 1917, the exchange of ratifications of the PARCEL-POST CONVENTION, concluded on January 28 of that year between Ecuador and Panama, was made. This convention provides for the establishment of a regular parcel-post service, without declared value, in accordance with the provisions of the convention of Washington of June 15, 1897, on parcels up to 5 kilograms in weight and whose greatest dimension does not exceed 60 centimeters.

At the beginning of November last an ad referendum obligatory GENERAL ARBITRATION TREATY was concluded in Montevideo between the representatives of the Republics of Paraguay and Uruguay. Under this pact all controversies arising between the high contracting parties, and which can not be settled through diplomatic channels, are to be submitted to arbitration. The arbitrator is to be the president or ruler of a State, and if no agreement can be arrived at as to his selection the parties in interest shall submit their dispute to the Permanent Tribunal of The Hague established under the conventions of 1899 and 1907. The treaty is operative for a period of five years, and if not denounced by one of the parties shall be considered extended for a period of another five years, and so on successively.

Early in November, 1918, the Governments of Paraguay and Uruguay concluded a COASTWISE CONVENTION, under the terms of which each of these nations permits vessels of the other to participate in the coastwise trade of the country under the same rules and regulations and upon the same terms accorded national vessels. This convention is to remain in force until one year after one of the high contracting parties manifests its desire to the other to terminate or amend same.

The President of the Republic of Haiti ratified, under date of October 8, 1918, the following PAN AMERICAN CONVENTIONS subscribed to at the Fourth International Conference of American States, held in Buenos Aires from July 12 to August 30, 1910: Literary and artistic copyright, inventions, patents, designs, and industrial models, and protection of trade-marks.

LEGISLATION

ARGENTINE REPUBLIC.

The Executive power has promulgated the new COASTWISE LAW, No. 10606, the principal provisions of which are as follows: The navigation and coastwise trade between ports of the Republic is reserved for ships flying the Argentine flag, but foreign vessels are permitted to enter one or more ports to unload freight which they bring from abroad and to take on export cargo. Vessels engaged in the coastwise trade, in order to be considered national, must use the Argentine flag, be commanded by Argentine captains, and have a crew of at least one-fourth Argentines when the vessels are not less than 200 tons. Foreign vessels detected in illegal coastwise trade are subject to a fine of from 4 to 12 pesos per ton of registry. The Executive may arrange, through reciprocity, to allow foreign vessels to enjoy the privileges of national vessels, provided, always, without being subventioned by the State, they engage exclusively in navigating between Argentine ports and their respective countries. The President may grant bounties to naval shipyards and to Argentine navigation companies which organize and maintain regular oversea or coastwise service. These bounties are only applicable to ships flying the Argentine flag, whose owners live in the country, or which belong to companies organized abroad but whose principal offices, reserve funds, and legal domiciles are in the Argentine Republic.

BRAZIL.

The President has issued a decree providing for the reorganization of the COURT OF ACCOUNTS OR AUDITS. This court is divided into two sections with power to act jointly or separately as may be deemed expedient. The personnel of the court is made up of four bodies. The first of these, composed of nine members, decides and judges; the second, consisting of eight members, reports upon the accounts; the third issues instructions concerning the same, and the fourth is in charge of cases in which the department of justice and public credit is interested. The decree indicates in detail the jurisdiction and attributes of the court, the duties of the personnel, etc.

COLOMBIA.

On December 2, 1918, the new LAW CONCERNING SALT DEPOSITS (law 63 of 1918) was promulgated. Under this law all the maritime salt deposits belong to the nation and are to be worked

exclusively in future for account of the State. The Government will fix the selling price of salt in its warehouses and will operate the maritime salt deposits. The President is authorized to impose a tax, up to 3 centavos per kilo, on foreign salt imported through Atlantic coast ports, and to raise up to 3 centavos the import duty on foreign salt. Should the output of the maritime salt deposits be insufficient to meet the needs of domestic consumption, the Government may import foreign salt and offer same for sale in such Government warehouses as it may deem expedient.

COSTA RICA.

On October 15 last a law was promulgated relating to INSECTIVOROUS BIRDS, protecting such as are considered beneficial to agriculture. Violations of the provisions of the law are punishable by fines of from 15 to 25 colones, or by imprisonment.

The NEW ELECTION LAW, which provides for the election of senators, deputies, and municipal officers by the direct vote of the people, was passed by congress on October 28, 1918. The selection of President and Vice President of the Republic is made by an electoral college composed of those who, at the time of the election, are senators and deputies, and by those who, at any time within a period of six months, may have been President of the Republic, a cabinet officer, senator, deputy, or judge of the supreme court. The clubs or organizations formed in a province to work for the candidacy of senators and deputies have the right to register their tickets and to be represented at the time of casting and counting the ballots. Candidates receiving the majority of the votes are elected to the offices.

CUBA.

Under date of December 2, 1918, the President of the Republic issued RULES AND REGULATIONS and a wage tariff for workmen at Habana Bay. These rules and regulations were published in a special edition of the Official Gazette of October 3, 1918.

DOMINICAN REPUBLIC.

The chief of the board of health has issued sanitary rules and regulations concerning MILK for the use of the public. According to these rules and regulations milk intended for public consumption shall only be distributed or sold in or by permanent markets. Cows, however, may be milked at the doors of the houses of the families who desire to buy milk.

ECUADOR.

On October 19, 1918, congress amended and added to the JUDICIAL LAW of the Republic. Among the changes made the following may be noted: Neither the law reporters nor subordinate

employees of the higher and supreme courts shall be related within the fourth degree of consanguinity, nor the second of affinity, to any of the judges of the court in which they are employed. Titled judges and cantonal aldermen or mayors shall be elected from the respective higher courts, the former holding office for three and the latter for one year. Witnesses are prohibited from giving testimony at hours other than from 8 a. m. to 5 p. m. Court employees who have served more than 20 years and have reached the age of 75 years, or who through organic sickness become unfit for work, are to be pensioned at a salary equal to that earned in the last position which they occupied.

A law of October 19, 1918, promulgated on the 23d of the same month, amends the STAMP LAW.

Under date of December 5, 1918, the President of the Republic issued a decree governing the rules and regulations of the TOBACCO LAW and repealing the decree of November 24, 1917, on the same subject. An export tax of 5 centavos per kilo, gross weight, is imposed on leaf and fine cut tobacco shipped abroad.

A law of October 28, 1918, specifies that provision shall be made in the budget for the payment of rent for dwellings occupied in the respective countries by the DIPLOMATIC REPRESENTATIVES of the Republic.

On October 28 last the INTERNAL TARIFF, or transit law, was promulgated. Under this law sales, transactions, etc., made in the country are taxed.

MEXICO.

On November 20, 1918, the President of the Republic issued a decree concerning the exploitation of the PRODUCTS OF MEXICAN WATERS, such as the fishery industry in rivers, lakes, and oceans under the jurisdiction of the nation, and providing that same can be carried on only through concessions or permits granted by the Executive power through the Department of Agriculture and Fomento in accordance with the terms and conditions prescribed by that Department.

Under an executive decree effective February 1, 1918, a tax was imposed on ALCOHOLIC BEVERAGES. Wines, alcohols, liquors, and other beverages must pay a stamp tax, when imported, of 70 per cent of the amount of the import duties, and foreign beer 80 per cent of said duties.

A law of December 30 repeals the decree of August 22, 1918, levying an IMPORT TAX on paper.

NICARAGUA.

A legislative decree promulgated on April 24, 1918, renders inoperative Executive decree of June 27, 1906, and puts in force, in so

far as the SALE AND LEASE OF PUBLIC LANDS are concerned, the law of February 6, 1906, and laws on this subject subsequent thereto. In addition sales are subject to the following rules: More than 50 hectares of land shall not be sold to any one person unless the latter has fenced, cultivated, or leased a larger area. Before the survey is made the location of the land must be determined in order to exclude from the sale roads and other means of communication. Public lands within a distance of less than 1,500 meters from the capital city of any of the departments are not subject to alienation.

PANAMA.

Under date of October 14 last the President of the Republic promulgated a LAW PROTECTING CHILDREN and domestic animals. Under this law any person who cruelly chastises a child, deprives it of water or food, or requires of it labor beyond its strength, shall be punished by a fine of from \$2 to \$50 for each offense. He who mistreats an animal or compels it to work beyond its strength, or who uses sick, maimed, or underfed animals, or who wantonly kills inoffensive birds or robs bird's nests, or practices any cruel treatment upon domestic animals, shall be fined from \$2 to \$50 for each offense.

PERU.

The town of Canchaque, district of the same name, Province of Huancabamba, has been made the CAPITAL of the District of Canchaque.

The law of December 6, 1918, establishes in the District of Huanayo the NEW DISTRICT of Pucará, with the town of Pucará as its capital.

SALVADOR.

The national legislative assembly issued on July 13, 1918, a MILITARY CODE which repeals that of January 1, 1880. The new code was promulgated on August 28 last, and is reproduced in the Official Gazette of October 4, 1918.

The Executive power has amended some of the articles of the POSTAL RULES AND REGULATIONS. Employees of that department are exempt from military service, municipal service, and other work incompatible with their duties. The cashier, the storehouse guard, the chiefs of the postage stamp and money-order divisions, first and second class postmasters, and postal contractors (when their contracts so state) are required to give bond.

VENEZUELA.

An Executive decree of October 9, 1918, provides for the taking of a census of the PETROLEUM AND COAL REGIONS of the



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A HUMAN PICTURE OF PRESIDENT WILSON.

This remarkable picture of President Woodrow Wilson was designed and photographed at Camp Sherman, Chillicothe, Ohio. It took 21,000 men to form the complete picture.

Republic. The sections of country are enumerated in which the working of these fields is permitted in accordance with leases made in due form through the department of fomento. The decree indicates the procedure to be followed in soliciting contracts for the exploitation of the deposits referred to and sets forth the rights and obligations of the parties in interest.



PUBLIC INSTRUCTION AND EDUCATION

PUBLIC INSTRUCTION IN ECUADOR.

During the last six years the system of public instruction in Ecuador has undergone a radical change, due to the organic law of November, 1912, which was issued in accordance with a legislative decree of October 21 of that year, which decree contains all the changes made in the aforesaid law. The new courses of study for primary schools date, approximately, from March 22, 1916. Those which govern in the normal schools of the Republic were introduced about the middle of 1915, the general rules and regulations concerning high schools were in force during the past year, and, finally, the plan of study of higher education in the universities dates from October, 1916.

As in the majority of the Latin American Republics, instruction is divided into primary, secondary, and high, these three grades being lay and free, and, in addition, primary instruction is obligatory. Of the different school authorities the chief one is the superior council, formed by the secretary of public instruction, who acts as chairman; the president of the Central University; a delegate elected by each of the universities of Guayaquil and Cuenca; a delegate from the Loja law school, the rector of the Mejia Institute; and the director of studies of the Province of Pichincha; the two last named in representation of secondary and primary education, respectively. The character of the board is naturally advisory, it having in charge the preparation of the general rules and regulations concerning studies for the whole Republic, the approval of separate rules and regulations of the different institutions; the development of and authorization for the establishment of new high, normal, and primary schools; the approval of the annual budgets of the universities and colleges, and, in addition, the settlement of such technical questions as may arise in teaching; and the giving of opinions and advice in educational matters. In each district or province there is a school

board, which cooperates with the superior council, but whose activities are limited to the province to which it belongs. These boards are composed of the director of studies, who discharges in the province the same duties that the minister of public instruction performs with reference to the entire Republic; two professors of the college of secondary instruction of the capital of the province; and two citizens elected by the municipality. In addition there are other school officers, such as school visitors and board inspectors, whose duties are to see that the requirements of the law in the branch of public instruction are complied with.

Beginning with the sixth year primary instruction is obligatory on all children. In accordance with the provisions of the organic law the primary schools are of three classes, namely, elementary, grammar, and high. The first two have three sections, which are called, respectively, low, medium, and high, and each of these sections has two grades. In the high schools there are two sections, the medium containing three grades, and the high containing only two. The elementary and grammar schools are solely for pupils between the ages of 6 and 12 years, while the age of admission to the high schools is from 9 to 14 years.

The elementary and grammar schools have as their object the imparting of knowledge which the State deems indispensable for every member of society to acquire, while the aim of the high schools is to complete, extend, and perfect the instruction taught in the lower grades. Obligatory instruction is given in the elementary and grammar schools and covers a period of six years.

In 1918, according to a report of the minister of public instruction, the educational budget was 1,300,000 sucres (sucre = \$0.4867), or 86,412 sucres more than during the previous year; that is to say, the largest sum ever appropriated by the Congress of Ecuador for educational purposes. There are now in operation in the Republic 103 mixed schools, 241 primary schools, 122 grammar, 16 high, 385 fiscal, 57 municipal, and 40 private schools, with a total enrollment estimated at 48,505, and a regular attendance of 41,090.

High-school instruction or secondary instruction, as it is also called in Ecuador, is given in the national colleges in two sections. According to the general rules and regulations of secondary education, issued on October 26, 1917, and which became operative in December of the same year, the subjects taught are as follows: Scientific subjects: Moral and civic instruction, Spanish, foreign languages, history, geography, physical sciences, natural sciences, mathematics, and philosophy. Technical subjects: Drawing, gymnastics, and music. The new general plan concerning these subjects was not issued during the school year 1918, the old plan of March 27, 1906, with its modifications, having been adhered to. In addition

to the general courses the national colleges teach special courses of bookkeeping and commerce, typography, surveying, agriculture, stenography, telegraphy, pedagogy, and languages.

To be admitted into a school of secondary instruction, it is necessary to be not less than 12 years of age, to have completed all the obligatory grades of primary instruction, pass the required examinations, be credited with good conduct, to have been vaccinated, and to be free from any contagious disease. The daily recitations in each subject are not to exceed 45 minutes, with an interval of 15 minutes between classes. Students are prohibited from having more than 30 hours of class work per week.

In the interior of the Republic instruction begins on the first Monday in October, and in the coastal regions on the first Monday in April. The colleges in the interior are open up to the second week, inclusive, of June, and in the coast section up to the first week of December. August and September are the vacation months in the interior of the Republic and February and March in the coastal regions.

Students in the high schools are required to take the following examinations: (1) Entrance examination, (2) monthly examinations on each of the subjects studied, and (3) oral examinations on the respective subjects. The entrance examination is both written and oral, but the general examinations are only in writing and last an hour and a half. The grading is from 0 to 20 points, and at least 10 points are required for approval.

High schools issue two certificates or diplomas. Pupils who pass the required examination on all of the subjects of the lower section are given certificates which entitle them to pass into the higher sections or to the fourth grade of the normal institutes should they desire to continue their studies there. After all the courses of the high school have been completed the degree of bachelor is conferred upon pupils who successfully take a written examination lasting three hours on two subjects—namely, philosophy and letters, and physical and natural sciences and mathematics. Pupils who pass the written examination are required to take an oral examination lasting from 50 to 60 minutes, and if they successfully pass same the degree of bachelor is conferred upon them.

With the exception of the Province of Esmeraldas there is at least one national college in each of the Provinces of Ecuador. In 1917, according to a report of the minister of public instruction, the matriculates in these colleges were as follows: Bolívar de Tulcán, 19; Teodoro Gómez de la Torre, 59; Mejía, 292; Vicente León, 67; Bolívar de Ambato, 65; Maldonado, 100; Pedro Carbó, 70; Juan B. Vazquez, 76; Benigno Malo, 240; Bernardo de Valdivieso, 105; Nueve de Octubre, 53; Espejo, 50; Vicente Rocafuerte, 299, and Olmedo, 44.

GENERAL NOTES

ARGENTINE REPUBLIC.

The Navy Department recently ordered the WIRELESS telegraph station on Martin Garcia Island, near Buenos Aires, opened to public traffic. This station covers a radius of about 100 miles.—According to statistics published in the Argentine Economic Review the POPULATION of the Argentine Republic on December 31, 1917, was 8,284,266 inhabitants, as compared with 7,958,797 on the same date of 1914.—Reports from Rosario are to the effect that while that city has large quantities of cereals, flour, and stock, products available for export, there is a brisk DEMAND FOR IMPORTED PRODUCTS such as petroleum, coal, jute and twine, cotton and woolen goods, wire, wrought and galvanized iron, agricultural and other machinery, news print paper, etc.—Within the last two years the increased acreage planted to PEANUTS in the Province of Cordoba amounted, approximately, to 5,000 acres. Chick peas and butter beans are also largely cultivated in this section.—An AMERICAN CHAMBER OF COMMERCE was recently organized in Buenos Aires with 85 charter members and a contributed fund of 60,000 pesos. The annual dues are 240 pesos per member.—Plans are reported to be under consideration by the Argentine Association of Electrical Engineers looking to the utilization of the IGUAZU FALLS to the extent of 675,000,000 kilowatt hours per annum. The capital necessary to carry this project to a successful termination is estimated at 80,000,000 pesos, or nearly \$40,000,000. Under this plan Buenos Aires, Rosario and other important industrial and commercial centers are to be supplied with electricity generated at these falls. The project, up to the present time, has not gone beyond the preliminary stage.—It is proposed to hold the FIRST CHEMICAL CONGRESS of the Argentine Republic in Buenos Aires in 1919 at a date to be announced later.

BOLIVIA.

CONSTRUCTION WORK on the Potosi to Sucre Railway cost, up to May 31, 1918, about 2,680,000 bolivianos, including expenditures for material. On the date mentioned 35 kilometers of grading had been completed and was ready for the laying of the rails.—El Nuevo Tiempo, a daily newspaper of the National Capital, reports the identification in the Metropolitan Church of La Paz of four PAINT-

INGS of great artistic value, believed to be the work of the celebrated painter, Rubens. This discovery has awakened great interest in artistic circles in the Bolivian capital.—In 1917 the COROCORO RAILWAY carried 13,535 passengers, as compared with 10,019 in 1916. The copper hauled over this line in 1917 amounted to 4,854 tons of ingots and 29,600 tons of ores. During the first five months of 1918 this road transported 5,688 passengers, as compared with 5,334 during the same period of the previous year.—Alberto Diez de Medina, formerly MINISTER of Bolivia near the Government of Colombia in Bogota, has been appointed minister of Bolivia near the government of Caracas, Venezuela.

BRAZIL.

Col. Itara, a Japanese subject, who is now studying the capacity of the iron and manganese smelters in the central and southern States of Brazil, as well as the value of ZARCONIUM, a new metal known to exist only in the State of São Paulo, reports that said metal is the hardest in the world and that its quality is superior to that of the best steel. As the mining wealth of Brazil is incalculable, Japan proposes in future to be one of the largest buyers of Brazilian ores.—On September 11 last the new PORT OF RECIFE, Pernambuco, was opened to traffic with appropriate ceremonies. These port works were begun in 1907, during the administration of Dr. Affonso Costa, under the direction of a French corporation. The wharves, warehouses, and machinery of the port of Recife make it one of the most commodious and modern of the Atlantic ports of South America.—In January, 1919, the American ambassador in Rio de Janeiro cabled that the congress of Brazil had adopted an executive decree authorizing the continuance during 1919 of the PREFERENTIAL TARIFF treatment of certain American products. The articles on which the reduction is to be granted will be specified in a separate decree. It is thought that the list will be substantially the same as that of 1918—namely, a 30 per cent reduction on imports of flour, and 20 per cent on the duties of the following goods when produced in the United States: Condensed milk, manufactures of rubber, paints, and colors except writing inks, varnishes, typewriters, refrigerators, pianos, scales, windmills, cement, corsets, dried fruits, school furniture, and writing desks.—The department of agriculture of the Government of Brazil has authorized three Brazilian firms to erect factories for the production of CAUSTIC SODA in Brazil to the amount of 5,280 tons annually, or about 3,220 tons less than the annual consumption of this chemical during the last five years. The Government proposes to lend to these companies 75 per cent of the cost of the factories. The three companies referred to will use the electrolytic process in the manufacture of caustic soda. A fourth company has been authorized to use another process.

CHILE.

Up to November 13, 1918, the department of industry and public works had expended the sum of 1,624,299 pesos, currency, and 8,440,666 pesos, gold, in SEWER CONSTRUCTION WORK in the cities of Concepcion, Taltal, Antofagasta, La Serena, Curico, Talca, Chillan, and Valdivia.—November 23 last completed the expiration of a century since the arrival in Chile of Lord Cochrane, who, with O'Higgins and San Martín, successfully battled for the independence of the Republic. The event was celebrated throughout the country with appropriate ceremonies. Lord Cochrane, known in Chilean history as the hero of Callao and Valdivia, was born in Scotland in December, 1775, and died in 1860.—A cablegram from the American ambassador at Santiago, under date of February 8, 1919, states that the Chilean Senate has passed a law authorizing the raising of a loan of \$9,000,000 Chilean gold pesos (gold peso = \$0.365), the proceeds of which are to be used to meet the expenses of the STATE RAILROAD. The cablegram further announces that an increase on railway passenger and freight rates has been agreed upon.—A bill introduced into congress by the minister of finance of the Chilean Government recommends the appropriation of approximately \$6,000,000 to be used by the Government in purchasing NITRATE with the object of enabling the nitrate companies to resume operations.—The American consul at Valparaiso advises that GERMAN MOORING CONCESSIONS have been canceled, and that other companies can now apply for the places formerly occupied by the German vessels.

COLOMBIA.

On December 19 last the new ARGENTINE MINISTER near the Government of Colombia officially presented his credentials to the President of the Republic.—Dr. Antonio José Uribe has been appointed chairman of the CONSULTING AND ADVISORY COMMITTEE of the Colombian Government in the department of foreign relations.—A recent British report concerning the PLATINUM and gold fields of the Choco district in Colombia states that there has been an increase in platinum production in the region referred to during the period of 1911 to 1917, inclusive, of 300 per cent. The approximate output of this district in 1911 was 12,000 ounces; in 1912, 15,000; in 1913, 15,000; in 1914, 17,500; in 1915, 18,000; in 1916, 25,000; and in 1917, 50,000 ounces. It is claimed that British and American engineers and prospectors have proved the existence of platinum and gold in paying quantities over many square miles of territory in this part of Colombia.

COSTA RICA.

The new members for 1919 of the BOARD OF THE MEDICAL COLLEGE in San José are as follows: President, Dr. Francisco A. Segreda; secretary, Dr. Teodoro Picado; treasurer, Dr. Roberto Fonseca Calvo; and members Dr. Carlos Pupo, Dr. Mariano Rodríguez, and Dr. Solón Núñez.—Statistics recently published by the Government of Costa Rica show that the COFFEE exported from that Republic from August, 1917, to November, 1918, had a gross weight of 25,246,711 pounds, or 1,797,839 pounds less than the exports during the same period of 1916-17. Of this quantity 25,179,933 pounds were clean or fully milled coffee (*beneficiado*), and 66,778 pounds in parchment (*pergamino*), the first classification forming nearly 98 per cent of the total exports. The coffee referred to was distributed as follows: United States, 96.45 per cent; United Kingdom, 0.61; Panama, 0.93; Spain, 0.74; Chile, 0.69; Italy, 0.46; Cuba, 0.09; and Nicaragua, 0.03. The estimated production of this coffee by provinces was: San José, 49.52 per cent; Heredia, 21.74 per cent; Alajuela, 20.09; and Cartago, 8.65 per cent.

CUBA.

In the fiscal year 1917-18 the IMMIGRANTS entering the Republic of Cuba numbered 54,857, as compared with 59,191 during the previous year.—Dr. Antonio Sánchez Bustamante, the delegate of Cuba to the PEACE CONFERENCE sailed from Habana on January 29 last for Paris.—On January 26, 1919, a shipment of 1,341 crates of VEGETABLES was made from the Isle of Pines consigned to New York commission houses. This was followed by another large shipment with the same destination, which left the Isle of Pines on the 6th of the present month.—The CHAMBER OF COMMERCE of the Isle of Pines has reduced its annual dues from \$25 to \$5. The officers of this organization for 1919 are: George F. Young, president; N. K. Wiley, vice president; L. C. Giltner, treasurer; and George Payzant, secretary.—Press reports state that construction work was commenced about the middle of the present month on a RAILWAY from Cienfuegos to Fomento, via Guaos, Cumanayagua, Barajagua, Mosa, and Manicaragua. This line will traverse a rich agricultural and mining section, and is expected to be a boon to sugar-cane growers, inasmuch as it will solve the difficulties they have heretofore had to contend with in the transportation of sugar cane.

DOMINICAN REPUBLIC.

The city council of Monte Cristi has decided to lease the Cayo Pablillo SALT MINES for a period of five years.—An AMUSEMENT COMPANY has been organized in the city of Santo Domingo

with a capital of \$50,000. This company proposes to buy, lease, or acquire suitable lands for the construction of hippodromes, race tracks, and for such other uses as may be deemed expedient in the furthering of these and other popular sports.—The Government has ordered the bureau of public works to take charge of building the extension of the San Pedro de Macoris WHARF.—Recently wholesale houses in Porto Rico, representing principally Spanish interests, have shipped important consignments of merchandise of American manufacture, consisting principally of shoes, notions, dry goods, and hardware, to the Dominican Republic. These houses carry a complete line of samples and employ salesmen familiar with the Spanish language.

ECUADOR.

The congress of Ecuador has appropriated 50,000 sucres (sucre = \$0.4867) for use in DREDGING and cleaning the Guayas and Babahoyo Rivers. These funds are to be expended by the municipal councils of the cities of Guayaquil and Babahoyo in acquiring dredges and in carrying on the work. The city of Guayaquil, the largest and most important port of the Republic, is on the Guayas River, and is in water communication with Babahoyo by means of small boats and rafts.—The organizing committee of the THIRD CONGRESS OF STUDENTS of the Great Colombia has arranged for a competitive contest among the students of the universities of Ecuador in formulating the manifest which is to be sent to the students of Colombia and Venezuela.—Congress has made August 7, 1919, the date of the completion of the first centenary of the battle of Boyaca—one of the battles which made possible the emancipation of South America—a NATIONAL HOLIDAY.

GUATEMALA.

The President of the Republic has appointed a committee, the chairman of which is the ranking general of the Guatemalan army, to prepare drafts of the general military rules and regulations, a MILITARY CODE, and rules and regulations for artillery, cavalry, and infantry drill, as well as special rules and regulations covering all auxiliary military bodies.—According to Guatemalan press reports the chief of the sanitary delegation sent by the Rockefeller Foundation to investigate the YELLOW FEVER epidemic in Central America states that this disease has been eliminated from the Pacific coast ports of Guatemala, and that the Atlantic coast ports of the Republic are in an excellent sanitary condition.—On December 7, last, Dr. Salvador Guerrero, minister of Nicaragua near the Government of Guatemala, was officially received by the President of the Republic.—According to a table of MARÍTIME DISTANCES published by a Guate-

malan newspaper the distance from New Orleans to Puerto Barrios is 965 miles, so that a steamer sailing at the rate of 12 miles an hour requires about 80 hours in which to make the trip. The distance in a straight line from New York to Puerto Barrios is 1,765 miles.

HAITI.

The Cuban sugar companies employing HAITIAN LABORERS in their plantations in Cuba have been invited by the Haitian department of the interior to keep a list of all the men engaged by their agents in Haiti and to send it to the consul of Haiti at Santiago.—An EXPERIMENTAL FARM has been established at Thor, commune of Port au Prince, by the Government. A number of boarder students, whose expenses are paid by the department of state, are already attending the agricultural courses given at the farm, and a circular has been sent by the Government to the municipalities throughout the country requesting them to send additional students. The boarding rate is only \$11 per month.—The Haitian Government is represented at the PEACE CONFERENCE in the French capital by M. Tertulien Guilbaud, the minister of Haiti at Paris.—Le Matin announces that an ASSOCIATION OF THE HAITIAN PHYSICIANS will be organized shortly in Port au Prince.

HONDURAS.

On January 6 last, according to press reports, the national congress elected the following persons, respectively, first, second, and third DESIGNATES TO THE PRESIDENCY of the Republic: Lic Francisco J. Mejía, Dr. Nazario Soriano, and Gen. Leopoldo Cordova.—The President of the Republic has recognized the juridic entity of the ASSOCIATION OF ENGINEERS of Honduras and has approved their by-laws. This organization was founded for the purpose of encouraging and strengthening the bonds of fraternity, mutual protection, and solidarity among Honduran engineers.—The budget of the MILITARY SCHOOL for the fiscal year 1918-19 amounts to 77,930 pesos.

MEXICO.

The BACTERIOLOGIC LABORATORY in the City of Mexico, annexed to the superior board of health of the Mexican Government, and which has for its object an active campaign against tuberculosis and other infectious and contagious diseases, is now in operation.—A SCIENTIFIC COMMISSION composed of Carlos Uett, Gudumond Hatty, and Mrs. Emilia D. Hatty has planned to leave Copenhagen in the near future to study Mexican archaeology and ethnology. The National Museum of Copenhagen is sending with

this commission an interesting collection of objects belonging to the stone age to be presented to the National Museum of Mexico.—On January 15 last a special SURTAX of 15 per cent of the respective duties on all goods imported or exported by parcel post became operative. Where other surtaxes are in force, such as the 2 per cent port tax, they are to be calculated on the net amount of the duties excluding the new surtax established under decree of January 7, 1919.—Valuable ONYX fields are being developed in the mountainous region adjoining the upper portion of the Tehuantepec River valley and along the Toquisistlan River. The onyx lies close to the surface and is said to be superior to that of Lower California. One of the great difficulties in the development of these fields is the lack of adequate transportation facilities.—BEEKEEPING is becoming an important industry on the Isthmus of Tehuantepec. A number of Americans are engaged in this industry and the apiaries in this section of the country at the close of last year contained about 1,400 hives. Bees on the Isthmus are said to be practically free from disease and the bee moth is unknown there. There is a brisk local demand for the wax, and honey brings about 30 cents, gold, a pound.—An executive decree of January 9, 1919, extends indefinitely the EXEMPTION OF IMPORT DUTIES on wagons, motor trucks, carriages, and all other vehicles. Beginning with the first of the present year the Mexican Government reestablished import duties on the following foodstuffs: Rice, $2\frac{1}{2}$ cents, American currency, per kilo; lard, 5 cents; beans, oats, and potatoes, 1 cent; wheat and other flours, $2\frac{1}{2}$ cents; and sugar, $2\frac{1}{2}$ cents. Unmilled wheat and corn are exempt from duty.

NICARAGUA.

The Government of Nicaragua has sent Porfirio Solórzano to the United States to study VETERINARY SCIENCE at Government expense for a period of two years. On returning to Nicaragua Señor Solórzano agrees to serve the State, in such place or places as may be deemed expedient by the proper authorities, for a period of at least two years.—Señor Carlos A. Villanueva has been appointed CHARGÉ D' AFFAIRES of Nicaragua near the French Government in Paris.—The Nicaraguan Government has granted a TIMBER CONCESSION to Manuel Gutiérrez Pena, an American citizen. The concession covers timber and other land bounded by the Coco or Wanks River and the Honduran frontier. The concessionaire has not only the right to cut timber for export, but may also extract rosin for shipment abroad. The Nicaraguan Government is to receive 50 cents for each tree cut and exported. The contract is for 49 years, and the right is given to transfer same or to form a new company for the exploitation of the lands.

PANAMA.

The Executive Power has contracted with Serrafina Barrera for transporting the **MAILS**, including parcel-post packages, to different parts of the Republic in vessels of the National Navigation and other steamship lines now in operation or which may be established in future.—The national assembly has passed a law requiring live **CATTLE** intended for consumption in the cities of Panama and Colon to be officially weighed within 24 hours after their arrival and imposing a tax of 0.50 balboa per head on cattle weighed and slaughtered.—In 1917 the **IMPORTS OF MATCHES** of Swedish manufacture sold through Danish houses were valued at \$27,000, as compared with \$32,000 for merchandise from the same source, sold through German houses in 1915. The total imports of matches from Sweden in 1915, 1916, and 1917, respectively, were \$81,000, \$35,000, and \$34,000. The imported matches used in Panama are safety matches, which strike on the box.—A recent report of the American consul general in Panama is to the effect that the municipal authorities of the City of Panama are considering plans for the construction of a new, up-to-date **ABBATOIR**.

PARAGUAY.

According to the bureau of statistics of the Government of Paraguay covering the **DEMOGRAPHIC STATISTICS** of the third quarter of 1918, there were 651 births and 337 deaths in Asuncion during the period referred to. The disease causing the most deaths was pneumonia, with a total of 29. The deaths of children under 2 years of age numbered 98, or nearly one-third of the entire number.—Baltasar Ballario, a young Paraguayan mechanic and industrial **ENGINEER**, who has been studying in the Polytechnic Institute at Turin, was recently graduated with high honors from that institution.—The American consul at Asuncion states that the **RATES OF EXCHANGE** between Argentine gold and Paraguayan currency at specified times in 1917 were as follows, the figures representing the number of Paraguayan paper pesos required to buy one Argentine gold peso: 38.4 in March, 31.22 in January, and 35 in December. Early in 1918 the rate declined to 25 Paraguayan pesos for 1 peso Argentine gold. The Government Conversion Office was established early in 1916 to enable the Government to control the rate of Paraguayan paper money. At the close of 1917 the conversion office had 13,694,240 Paraguayan pesos and 2,000 Argentine gold pesos for use in stabilizing commercial exchange of Paraguayan money through either the sale or the purchase, as circumstances require, at arbitrary rates fixed by the conversion office for that purpose. In spite of efforts to fix the rate of exchange, the paper

currency fluctuated considerably during the year. In Paraguay all local expenses, wages of laborers, etc., are paid in Paraguayan money regardless of the rate of exchange.

PERU.

Alejandro O. Deustua, a member of the faculty of the San Marcos University and at one time minister of public instruction of the Peruvian Government, has been appointed director of the NATIONAL LIBRARY in Lima.—The president of the Republic has reorganized his CABINET as follows: Chairman of the cabinet and minister of home government (Gobierno), Dr. Germán Arenas; minister of foreign relations, Dr. Arturo García; minister of justice and interior, Dr. Angel Gustavo Cornejo; minister of war and marine, Gen. Juan M. Zuloaga; minister of fomento, Señor Manuel Virrelli; and minister of finance, Señor Hector Escardó.—The Commercial Bulletin of the Mercantile American Bank of Peru has published an article stating that for the past few months the Peruvian sugar planters have been enjoying the advantages of two new markets—namely, Argentina and Mexico—but that after the Cuban sugar crop is offered for sale it is believed that there will be a considerable fall in prices in these markets, and that the exports of Peruvian sugar to the countries mentioned will be greatly curtailed. Should this prediction come true it will be necessary for Peru to find other markets for its excess of sugar, which it is thought will be easy to do if tonnage is available to transport this product to European markets.

SALVADOR.

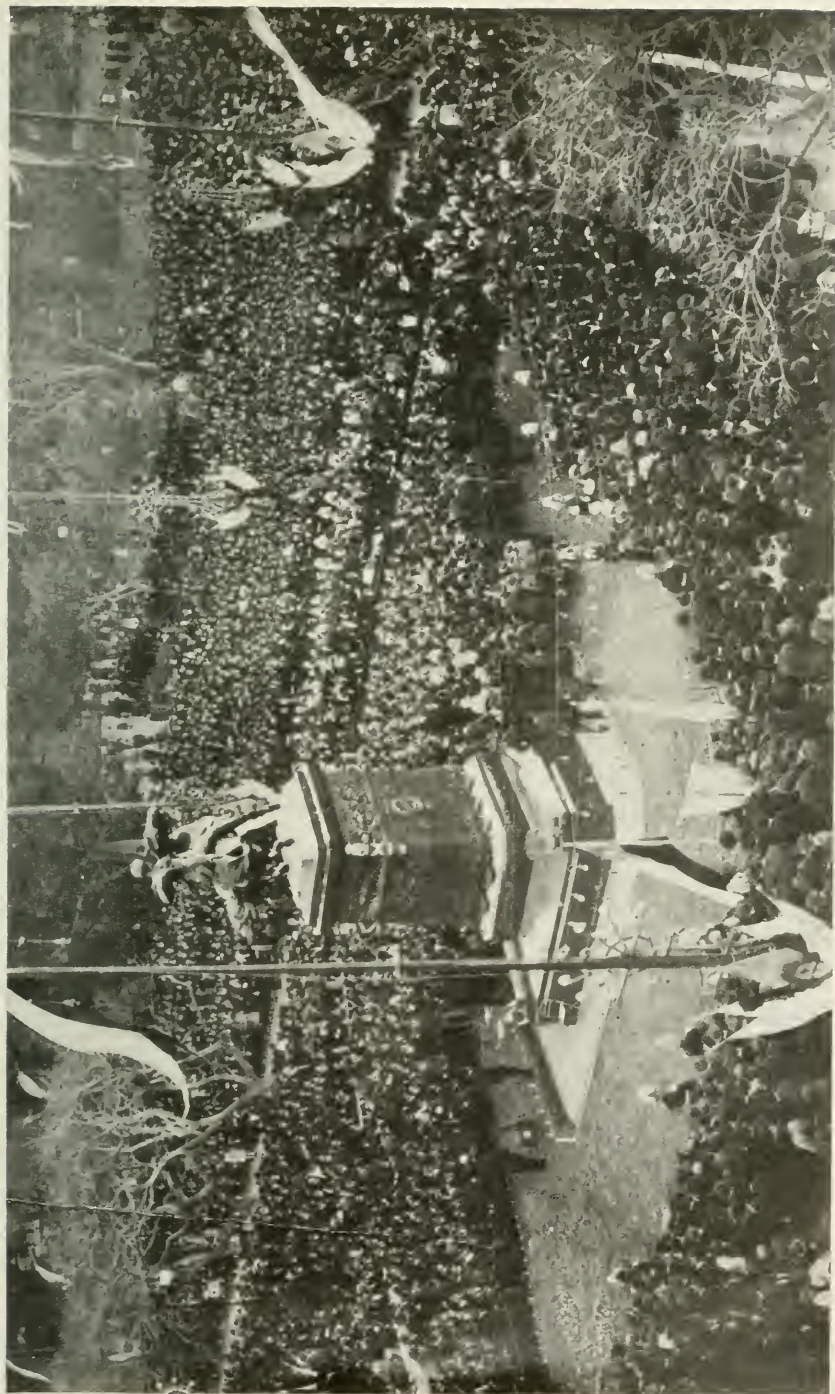
Señor Jorge Melendez and Dr. Alfonso Quiñones Molina have been elected, respectively, PRESIDENT and Vice President of the Republic. The present session of the national assembly will certify the election of these gentlemen. The constitution prescribes that the President and Vice President of the Republic shall be Salvadoreans by birth, shall be over 30 years of age, and shall not belong to the ecclesiastical state.—Under the name of SALVADOREAN WORKMEN'S UNION (Unión Obrera Salvadoreña) a federation of workmen's societies has been established in the Republic. This organization proposes to labor for the improvement of the condition of workmen, and to enter into agreements with workmen's societies in other countries for the purpose of rendering practical organizations of this kind, and in order to further the principles of solidarity and mutual good will among workmen.—The President of the Republic has appointed Dr. Juan Francisco Paredes, a distinguished jurist, MINISTER of home government, fomento, and agriculture.—Press reports state that the section of RAILWAY between Cojutepeque and Santa Cruz Michapa is expected to be completed by the end of the present month.

URUGUAY.

The 1918 WOOL CLIP of Uruguay is estimated at 100,000 bales of about 1,000 pounds each. The wool is reported to be of an exceptionally fine quality and free from impurities. The shearing of the 1918 wool clip began early in October last, but complete returns as to the production will probably not be available until some time during the first part of the present year.—While MANGANESE ores are found in many parts of the Republic, many of the deposits are of too low a grade to be worked commercially. One of the main deposits of this ore is situated near Zapucay Creek, Department of Rivera. This deposit consists of two hills of manganese ore, from which it is estimated that 80,000,000 tons could be taken out by open cuts. The ore assays, on an average, 34.8 per cent iron, 22.7 per cent manganese, 9 per cent silica, 0.03 per cent phosphorous, 0.05 per cent sulphur, and 33.42 per cent of other matter. The deposit is about 75 miles from the Central Uruguay Railroad, and the lack of adequate transportation facilities at present makes the working of same commercially too difficult and expensive to produce a satisfactory profit at the present time. This is true of the manganese deposit at Caraguata, department of Tacuarembó. The Carrasco deposit on the coast near Montevideo is being worked on a small scale. The Pantanoso deposit in the immediate vicinity of Montevideo is being worked by an Argentine company, and the output exported to Argentina for use in glass factories. A decree of September 23, 1918, prescribes that manganese ores from Uruguayan mines are not included in the export restriction contained in the law of June 5, 1915.—The ARGENTINE-URUGUAYAN BANK in Buenos Aires is authorized by its by-laws to increase its capital to a maximum of 50,000,000 pesos.

VENEZUELA.

According to figures furnished by the American minister in Caracas, three-fourths of the total IMPORTS of Venezuela in the first half of 1918 and two-thirds of the imports of 1917 came from the United States. More than half of the exports of Venezuela at the present time go to the United States.—On November 16, 1918, the MIRANDA HOSPITAL for the use of maimed and wounded soldiers, was opened in Paris. The money for the founding of this hospital was obtained by the Red Cross in Caracas, and its upkeep is to be maintained out of funds donated by Venezuelans.—A recent Executive decree orders the printing in Spanish and English of two editions of BOLIVAR'S CELEBRATED INAUGURAL ADDRESS before the Angostura Congress, the first centenary of which occurred on February 15, 1919.



UNVEILING OF THE O'HIGGINS MONUMENT IN BUENOS AIRES.

On September 18, 1918, the one hundred and eighth anniversary of Chile's independence, the handsome monument which the Argentine people have erected in honor of Gen. Bernardo O'Higgins, was unveiled in the Plaza Rodriguez Peña, of Buenos Aires. Chile was represented at the occasion by a special embassy led by Don Gonzalo Buñes, the distinguished statesman and historian, and including a number of citizens prominent in the political, social, navy and army life of Chile. The monument to O'Higgins is the work of the Chilean sculptor, Sr. Guillermo Cordoba, who won first prize in the contest held in Chile in 1911 by the Government of Argentina, whose wish was that the work should be executed by a compatriot of the hero of Chacabuco.

BOOK NOTES

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- Estadística agrícola. Año agrícola 1916-1917. Ministerio de agricultura de la República Argentina. Buenos Aires, Talleres gráficos del Ministerio de agricultura, 1917. 230 p. 8°.
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- Páginas dispersas. Escritos y discursos. Por Juan M. Garro. Buenos Aires, Estab. Tip. de J. Weiss y Preusche, 1916. 310 (1) p. 12°.
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- Homenagem á Inglaterra. Collectanea de publicações relativas ao grande festival realizado do Teatro Lyrico do Rio de Janeiro em 5 de agosto de 1917. Liga Brasileira pelos aliados. Rio de Janeiro, Typ. do Jornal do Commercio, 1918. pls. 68 p. 4°. (Text in Portuguese and English.)
- Mensagem dirigida a assemblea legislativa de Sergipe pelo presidente do estado . . . 1916, 1917, 1918. Aracaju, Imprensa Oficial, 1916-1918. 4°. 3 pamps.
- Revista do Instituto geographico e historico da Bahia. 1918 (1° e 2° semestres). Anno XXV, No. 44. Bahia, Imprensa Oficial do Estado, 1918. 400 (1) p. 8°.
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COLUMBIA.

- Constitution. American chamber of commerce of Colombia. Adopted November 30, 1918. Barranquilla, Talleres López, 1918. 11 p. 8°.

Escritura y estatutos de la compañía. Compañía telefónica de Medellín. Medellín, Tip. del Comercio, 1914. 35 p. 12°.

La tradición. Tesis presentada por Genaro A. Muñoz O. para optar el título de doctor en derecho y ciencias políticas. Popayan, Imp. del Depto., 1918. 62 p. 8°.

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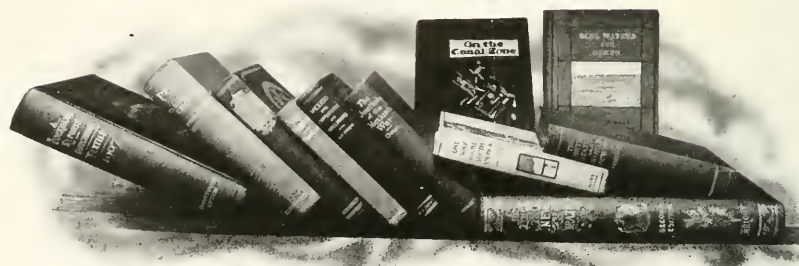
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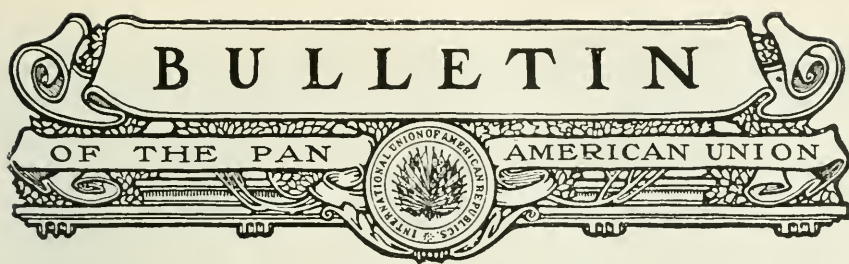
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DR. BALTASAR BRUM, PRESIDENT OF URUGUAY.

Dr. Baltasar Brum was born in the Department of Artigas in 1883. Few statesmen of his age have equaled his record in public affairs. He received his education in the Polytechnic Institute of Salto and the University of Montevideo, where he was graduated with the degree of Doctor of Laws in 1908. Upon graduation he made an extensive tour of Europe, and returning began the practice of law in Salto. In 1910 he was delegate from Salto to the convention of the Colorado party, convened to name a candidate for the presidency, and the convention selected him to be spokesman of all the delegates of the interior as to their presidential preferences. In 1913 Dr. Brum became Minister of Public Instruction and Justice, and continued in that post until February, 1915. From February, 1914, to the end of his tenure he had charge of the portfolio of Foreign Affairs as well. In March, 1915, Dr. Brum was appointed Minister of the Interior and also had charge of the portfolio of the Minister of Finance during the latter's absence in 1915. In 1916 he received his fifth portfolio—that of Minister of Foreign Affairs. In 1918 Dr. Brum and his party came to the United States upon special invitation as guests of the Nation, and on March 1, 1919, at the age of 35, Dr. Brum was inaugurated President of the Republic of Uruguay.



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No. 3

GLIMPSSES OF BRAZIL AND ITS RIVER CITIES¹

MANY hours before we expected to see the shore of Grão Para, the vessel was slowly plowing its way through the tawny waters that had originally swept down from the Brazilian mountains. We were really in the waters of the Amazon, whose peaceful flood subdued even the waves of the Atlantic and paved a friendly way through the ocean as a welcome to the traveler. The waters through which we sailed bore the soil and sands of Brazilian territory, and the extraordinary King of Rivers thus carried them far out into the sea, which in turn deposited them on the shores of other American nations, from the southern coast of the United States on the north, down to the shores of Argentina on the south, forming a fraternal bond between the nations of our Western Hemisphere, a phenomenon of telluric emigration well described by the Brazilian writer, Euclýdes da Cunha, in his literary masterpiece, "À Margem da História."

As my mind dwelt dreamily on some of the historical events which had taken place in the immense territory, such as the founding of Belem by Francisco Caldeira Castello Branco; the occupation of the Amazon basin by the gallant Pedro Teixeira, who defeated and expelled the foreign invaders and then sailed up the Amazon to carry the invincible Portuguese flag even to Quito; and various other interesting scenes, some friends aroused me to call my attention to a bright white spot on the far-off horizon. Slowly the spot became larger, until we finally distinguished the outlines of a small sail. An hour later, much to the interest and satisfaction of all on board, the little canoe reached the steamer, and it developed that

¹ By J. de Siqueira Coutinho, of Pan American Union staff



Courtesy of Fidanza Studio, Belém, Pará.

MONUMENT OF DR. MALCHER, BELÉM, PARÁ.

This monument was erected to perpetuate the memory of the famous and kind-hearted physician, Dr. Gama Malcher, and is situated in the beautiful square of Visconde de Rio Branco, in the business section of the city. Stately and magnificent palms surround the monument and the square is embellished by luxuriant vegetation.



Courtesy of Fidanza Studio, Belém, Pará.

COUNSELOR JOÃO ALFREDO STREET, BELÉM, PARÁ.

This street is one of the busiest of the city in the shopping district.

with characteristic Brazilian boldness its mission was to deliver a cable to the captain of our vessel, still over a hundred miles from shore.

Some two hours later land could be discerned, and my joy and enthusiasm reached their highest state when some of my Brazilian and French covoyagers and friends surrounded me and bade me welcome, by the reading of a beautiful little poem written especially for the occasion by one of them, Mr. Galdino Lima. This touching and appreciative welcome was but another demonstration of characteristic Brazilian hospitality.

After the lapse of another two hours we could distinguish Salinas, the first Brazilian town to be seen by anyone who visits the Amazon region by ocean steamer. Soon we would be in the river itself, that "fresh-water sea" (Mar Doce), of which the great writer, Affonso Celso, tells the story that a certain historical person once asked "if the ocean did not owe its existence to that river, and if indeed it were any more than a receptacle to hold the water that the Amazon constantly poured into it."

As a matter of fact, the great Amazon basin covers an area five-sixths as large as that of the continent of Europe. It is larger than the basins of the Mississippi, the Rio de la Plata, and the Orinoco combined, while the volume of water it discharges into the Atlantic is five times as great as that of the Mississippi. The Amazon, together with its system of tributaries, offers the world 40,000 miles of fluvial navigation.

Late in the afternoon, a special pilot having come on board, our vessel entered the Para River through a wide channel, on the right bank of which and on a widening of the river known as Guajara Bay lies the city of Belem. It is through this opening that a part of the waters of the Amazon and of its tributary, the Tocantins, reach the ocean.

We seemed now to be in a new world—a world still in formation. "Men, there," says Euclýdes da Cunha, "are still impertinent intruders. They came without being expected or desired when Nature was trying to build its largest and most gorgeous salon. Everything is still in a magnificent disorder." The land that borders on this stupendous volume of water is generally low and covered with forests which sometimes touch the very water's edge. As night slowly descended and shrouded the scene with its dark mantle we could see the glimmer of lights in several places we passed, marking such summer resorts as Mosqueiro and Chapau Virado. Our vessel at last cast anchor, and toward the south, quite a distance away, we saw the diffused light of a large city, the city of Belem, metropolis of the Amazon, destined in the course of time to grow into one of the world's greatest ports, perhaps the greatest port of the



Courtesy of Fidanza Studio, Belém, Pará.

ONE OF THE HOTELS OF BELÉM, PARÁ.

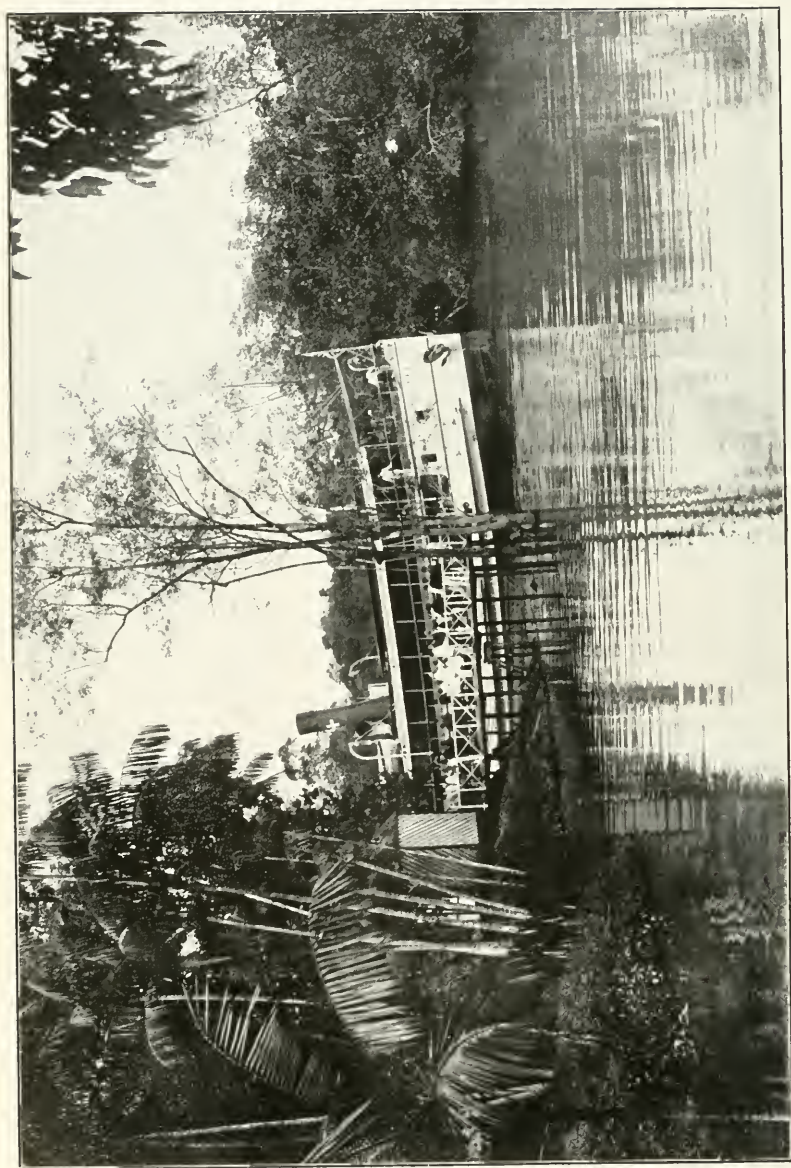
This picture shows one of the largest hotels of Belém, where the traveler finds every comfort. In the late afternoon and evening the tables on the terraces of the hotel are occupied by people of the best society of Pará.



Courtesy of Fidanza Studio, Belém, Pará.

EXECUTIVE PALACE, BELÉM, PARÁ.

This imposing structure was built in colonial times, and for more than half a century after the independence of Brazil the government of the Amazon Basin was located in this palace. The building has been remodeled several times, and its paintings and historical relics are worthy of a visit.



TYPICAL VIEW ON THE AMAZON RIVER AND ITS TRIBUTARIES.

One of the many scenes on the Amazon showing a stop made by the river steamer. These boats are called galiolas in the Amazon Valley. The land through which the Amazon passes is low and covered with matted forest. In many places the river is dotted with small islands separated from each other by narrow channels, making it impossible to distinguish the real banks of the stream.

Atlantic; for is not Belem at the head of the greatest river system of the world, at the entrance of the earth's largest river basin, whose soil can be made to produce food enough to supply the human race, and with a geographical location that places it in direct touch with all the greatest centers of the world's commerce.

The city of Belem, capital of the State of Para, was founded in 1616 by Francisco Caldeira de Castello Branco, the captain general who was sent from Maranhão to maintain Portuguese supremacy in the Amazon valley, to establish forts, and to expel the French, Dutch, and English invaders who were trying to settle in the country. Soon after the erection of the first fortress, Pedro Teixeira, a bold and intrepid officer, who subsequently became captain general, succeeded in clearing the country of these foreigners. Here, too, some years later, Portugal's greatest preacher, Father Antonio Vieira, raised his eloquent voice in defense of the native tribes against the colonists, and at the same time defended the rights of Portugal against all other claimants.

Captain General Castello Branco, after an inspection of the country, marked the site of the first fortress on the banks of the Guama River where it flows into the Para River, this confluence forming what is now known as Guajara Bay. Alternately built, destroyed and rebuilt, the fort has weathered the ravages of time and still holds a commanding view of the harbor of Belem. Close to it the first inhabitants built their homes, and a short distance from the military settlement was erected the beautiful church of St. Alexander by the Society of Jesus, commonly called the Jesuits.

As time passed the city grew, and the Portuguese Government found it necessary to erect a commodious building for its administrative offices. The city soon became a center for the exportation of colonial products, while from its shipyards were turned out merchant vessels, as well as several warships for the Portuguese navy, built from the excellent timber supplied by the Amazon forests.

Belem, a city of 200,000 inhabitants, offers to the traveler every comfort and modern convenience, whether he be on a trip for pleasure or for business. Besides the material comfort of the hotels, street cars, and automobiles, its people are very hospitable, highly educated, and refined. Its newspapers are very well edited, and the Historical and Geographical Institute and Press Association of Para are supported by a large number of distinguished writers, archeologists, historians, and geographers. Art also finds its admirers in Belem among several artists, musicians, and composers of no mean ability. The city has reason to be proud of its beautiful theater, its schools, the Mesericordia Hospital, Beneficencia Portuguesa, Portuguese Reading Room, Goeldi Museum, and many other public buildings.

The boulevard of the Republic bordering on the bay makes a magnificent promenade. Several picturesque streets and avenues,



Courtesy of Pedro Contento, Belém, Pará.

MISSIONARIES ON THE BANKS OF RIO GUAMÁ, STATE OF PARÁ.

This picture shows the landing of the missionaries on the banks of the Rio Guamá. These missionaries maintain among the Indians several schools and experimental farms.



THE VIRGIN FOREST OF THE AMAZON.

The vegetation of the Amazon section is very thick and composed of a great variety of plants. As shown in the picture the forests are impenetrable and it is necessary to use a hatchet to cut a path.

shadowed by mango trees, lead into the residential section of the city and from time to time widen into small parks, where the luxuriant tropical vegetation and stately palm trees seem to have reclaimed their natural forest home.

The harbor of Belem has good facilities for loading and unloading vessels of every description. At Valle de Cás, a short distance from Belem, are excellent dry docks and facilities for making repairs.

Belem is a terminal for much of the river shipping and a stop for the ocean boats carrying freight and passengers for Manaos and Iquitos. There are always hundreds of river boats, known locally as *gaiolas*, in Belem harbor, and at times one may see several large ocean-going steamers at the docks.

The Amazon River not only serves Brazil, but provides Iquitos, Perú, with a water route to the Atlantic Ocean. The river was officially opened by Brazil to international traffic in 1867, a fact which is symbolized and perpetuated by the beautiful Amazon monument erected at Manaos in the square of the Theatro do Amazonas.

Agassiz has said that the number of distinct species of fish found in the Amazon River is twice as great as the number found in the Mediterranean Sea. The best known of the inhabitants of the Amazon waters are the *pirarucú* fish, the river cow or *goaraba*, dogfish, turtles, crocodiles, and many others. The forest along the river banks is the home of many wild animals, such as several species of simians, the leopard, the jaguar, the capivara (from whose fat the oil of capivara is made), the paca, and the tapir. Flitting from tree to tree are innumerable species of birds, the best known being the *urubú*, the *urubu-tinga*, the tucan with the white or yellow beak, the parrot, the macaw, the gallinae, the jurity, the beautiful *guará* (whose feathers change with its age), and a large number of smaller birds with varicolored plumage.

Gliding through the forests several species of snakes go in quest of their living. Butterflies fill the air with their gorgeous and brilliant colors, dodging in every direction and adding enchantment to this paradise of the naturalist.

Hundreds of kinds of trees grow in the vast forests, affording excellent cabinet woods and building material. Industrial and medicinal plants abound. Palms, which have already been classified into more than 400 species, grow everywhere. The beautiful mirity palm and the assahy, from whose fruit the assahy drink is made, also grow in abundance. The rubber tree, the cocoa tree, and many fruit trees also grow along the banks of the Amazon.

A few hours after leaving Belem we arrived at the mouth of the Tocantins River and proceeded to sail through the Narrows of Breves, which are of unsurpassed interest and beauty. We felt as if we were literally in the heart of the forest. The branches of the trees were



Courtesy of Photographia Allemã, Manáos.

MONTALEGRE, A TOWN OF THE LOWER AMAZON.

This town has a picturesque location on the bank of the Amazon.



Courtesy of Photographia Allemã, Manáos.

THE BEACH AT SANTAREM.

The traveler will be delighted when he awakes early in the morning in Santarem, a beautiful little town with a fine beach. Santarem is situated at the mouth of the Tapajoz River, and in a few years will be one of the great business centers of the lower Amazon.



FATHER ANTONIO VIERIA, S. J.

Father Antonio Vieira, one of the greatest preachers of his time, spent his life in the defense of the natives and the rights of Portugal to the Basin of the Amazon. This picture reproduces the excellent painting of Dr. Theodoro Braga, one of the leading artists of to-day

constantly touching the boat, and as we sat on deck it seemed as though we were miles away from civilization. Here and there the tucans and macaws and birds both large and small were singing or making a noise according to their musical instinct. When we left Breves we again floated out on the broad expanse of the Amazon, which in many places resembles a lake rather than a river. On its banks we could see the houses and huts of the rubber gatherers, usually with a boat attached.

About two days after we left Belem we arrived at the attractive town of Santarem, which commands the entrance of Tapajoz River, and is the center of commerce of a large surrounding country. At Santarem we saw a great many beautifully decorated receptacles made of calabash shells, locally known as *cuias*. The making of these calabash receptacles is an industry in which the natives have achieved great skill.

The next stop was at Obidos, a small interesting town which was formerly a fortress, and soon after we arrived at Parintins, the first town of the State of Amazonas. A little further on we passed Itacoatiara, the last port before Manaos. Here the river is banked by high red rocks. This is the place where was found a most interesting inscription that Col. Ramos, the famous Brazilian epigraphist, succeeded in deciphering.

All the towns we had passed on the voyage up the river enjoy a strategic location on the trade routes of the Amazon, and as civilization advances in its victory over the tropics they will grow to be large and enterprising cities.

An interesting phenomenon on the Amazon River occurs at its junction with the Rio Negro. At this point the two currents raise a white bar of foam across the mouth of the Rio Negro. The black waters of the Rio Negro may be seen on one side of the foam bar and the blue waters of the Amazon, which beyond this point is known as the Solimões, are seen on the other. The waters do not mix, and as the boat passes through the bar of foam its wake is marked by oil spots.

As we proceeded up the Rio Negro we could see, glimmering at a distance, the city of Manaos. The city is situated on a hill on the summit of which stands the beautiful theater of the Amazon. Manaos, a healthy and picturesque town, is indeed a dignified princess of the Amazon. It is not a shrine where one goes to worship the Omnipotent, as are some of the ancient towns of the Old World, nor a sanctuary devoted to the sciences, as were many cities of the Middle Ages, but it is a place where art in its most complex form—the theater—is worshipped.

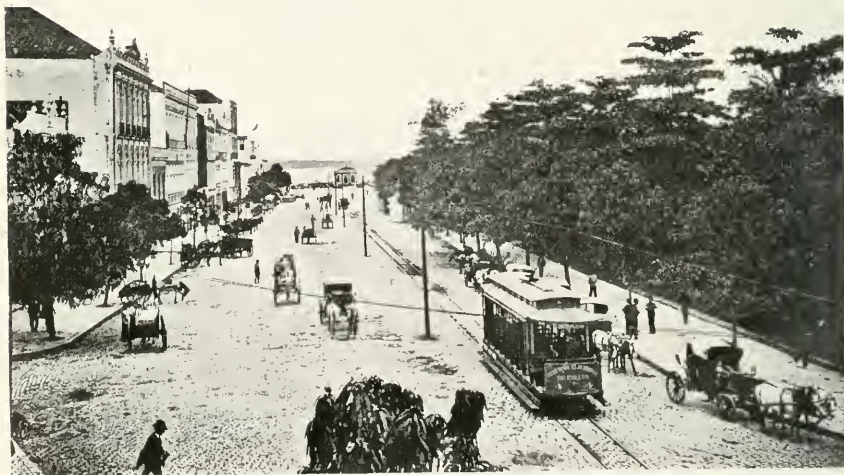
Under the direction of the energetic and clever executive, Dr. Eduardo Ribeiro, captain of engineers, Manaos was completely



Courtesy of Photographia Allemã, Manaus.

SAN SABASTIAN CHURCH, MANAÓS.

The San Sabastian church is located in the San Sabastian Square, where stands the famous theater of the Amazon. On the right may be seen the monument commemorating the opening of the Amazon to international traffic.



Courtesy of Photographia Allemã, Manaus.

AVENIDA EDUARDO RIBEIRO, MANAÓS.

The Avenida Eduardo Ribeiro is the principal thoroughfare of the city. It is a wide street with good buildings and many cafés.



Courtesy of Photographia Allemã, Manáos.

THE FORUM OF MANÁOS.

This building is the Palace of Justice, where the courts of the State meet regularly.



Courtesy of Photographia Allemã, Manáos.

THE CUSTOMHOUSE AT MANÁOS.

The customhouse at Manáos is located near the dock, and its appearance, different from many of the other public buildings, attracts the traveler's attention.

rebuilt along the most modern lines. From a small town it was made into a most progressive city with modern improvements, offering every comfort to her inhabitants and visitors, and excellent facilities for trade and commerce. Manaus of to-day is the great commercial center of the upper Amazon.

In this country of wilderness and jungle, where nature is constantly trying to show the smallness and helplessness of man, Manaus stands as a monument testifying to the energy and industry of the Brazilian



THE MONUMENT OF THE AMAZON, MANAÓS.

This picture shows the magnificent Theater of Amazonas and the monument erected to commemorate the date of opening the Amazon River to international traffic in 1867.

of the present generation. The city is splendidly laid out with beautiful streets and avenues, magnificent buildings and charming gardens, and the visitor is attracted by the fine sculptural masterpieces wrought by the celebrated artists of Europe. Its location on the water routes of the Amazon is unsurpassed. Its excellent wharf and docks make it a desirable port, while its theater, Portuguese hospital, and public buildings, among which are the Forum, the Benjamin Constante Institute, the Gymnasium, the Rio Negro Palace, and the Barracks, are all worthy of any of the large cities of Europe.

The excellent newspapers of Manaus, its university, historical and geographical institute, numismatic museum, and public library, which are supported by a large body of scholars, scientists, writers, and artists, most of them worshippers of St. Cecile, make the city a spot where the most advanced civilization of Europe seems to have been transplanted into the heart of the Amazon forest.

All this improvement and progress can be credited to the industry and culture of a few thousands of rubber gatherers who have taken from the forest tons of raw material to build their modern city. What will be the progress of this country when a few millions of settlers begin to work out systematically the agricultural resources of this seemingly inexhaustible land, where two or three crops may be obtained every year and where there lie hidden untold amounts of wealth of other kinds, no one dares estimate. It seems, indeed, as if the prophecies of Humboldt and of Bonifacio are now becoming real, tangible facts.

THE FIRST CENTENNIAL OF THE CONGRESS OF ANGOS- TURA

THE 15th of February last marked the date of the first centennial of one of the most important steps in the process of formation of the Spanish American States. It was on this day in the year 1819 that the second congress of the Provinces of Venezuela met in the city of Angostura, now Ciudad Bolivar. This Congress not only reestablished the independent government created by the first congress of 1811, held in Carácas—a government which later disappeared through the fortunes of war—but also laid the foundations for a greater nation than that formed by the Carácas congress.

Angostura was the cradle of the Greater Colombia, that powerful nation made up of Venezuela, New Grenada, and Ecuador; that magnificent State whose arms placed forever the seal of independence on the former Spanish colonies of America. From the standpoint of the political organization of the new States, the congress of Angostura is of paramount importance, because it was before this body that Bolivar, in a document which commands the admiration of posterity, established the principles of the organic law of Colombia



VIEW OF ANGOSTURA.

Angostura, to-day the city of Bolivar, is situated on the right bank of the Orinoco River. It was here that the second Congress of Venezuela was convened and great achievements accomplished for South American liberty. This city is a prosperous commercial center of a rich territory.



HOUSE WHERE THE CONGRESS OF ANGOSTURA WAS CONVENED.

This historic building was constructed for a college in the second half of the eighteenth century by the Spanish governor Centurión. It was here that the fundamental laws of the Republic of Colombia were drawn up as a result of the deliberations of the Congress of Angostura.

and outlined the general features of the constitution most suitable to the needs of the Spanish American countries.

The legislative assembly of the State of Bolivar, by decree of March 10, 1917, resolved to celebrate with due pomp and solemnity the first centennial of the meeting of the august senate responsible for the great events which culminated in the emancipation of Venezuela, New Grenada, Ecuador, and Peru and the foundation of Bolivia.

The Government of Venezuela, likewise, believing that no document could express more fully the scope of the action of the congress of Angostura and the transcendent views of the Liberator in convoking this Congress, than his famous address at its opening meeting, also issued a decree on December 19, 1918, directing that a reprint be made in Spanish and a translation into English of the address as a part of the commemoration by the government of the first centennial of that great assembly.

The BULLETIN takes pleasure in reproducing below the introduction to the reprint ordered by the Venezuelan Government, as it is a masterly analysis of the political ideals set forth by Bolivar in that paper, which, together with the Manifesto of Cartagena, the Kingston Letter, and the Message to the First Congress of Bolivia, is the embodiment of lofty political thought inspired by a scholarly education and natural genius.

THE POLITICAL IDEAS OF BOLIVAR AT THE CONGRESS OF ANGOSTURA.

From its earliest inception the revolution of Venezuela tended, unconsciously as well as instinctively, toward clearly defined ideas—absolute independence, a republican form of government, community of interests with all other countries, and the closest touch with European culture.

Documents relating to the revolution, both from Miranda and from the revolutionary leaders of 1797, 1808, and 1810, prove that the aims of the leading men capable of conceiving and achieving the political and economic transformation of the colony, were more far-reaching than a mere change of authorities.

Scarcely free from the rule of the captain general, the members of the Venezuelan colony, although invoking, as a matter of form, the rights of Ferdinand VII, proceeded in fact to carry out substantial reforms in the political and economic life of the country. They broke away from old prejudices, opened up a new field to the aspirations of the popular classes, even encouraging and fostering their desires; they acted as if they felt thoroughly at home; they performed acts of sovereignty; they initiated Latin-American diplomacy by sending representatives to New Grenada, the United States, and Great Britain; and gave evident proof, in the most solemn manner, of their sentiments of solidarity with the other Spanish colonies of America.

These facts, however, may be considered as not yet clothed with the prestige of law. But the first congress of Venezuela set its seal on the process by the well-considered declaration of independence of Venezuela, and the constitution of 1811, its immediate result, endowed the newborn State with all the attributes of a regular government. A new act was thus accomplished in the history of the Spanish colonies in America. On the American continent, besides the United States, there was now another constituted nation having the form and the essence of all free States, such as separate and definite powers, citizens' rights, and an electoral system for securing the



Photograph by Navarro, Caracas.

BOLIVAR AND HIS GENERALS DISCUSSING THE CAMPAIGN OF THE ANDES.

This famous painting by the German artist, Erwin Oehme, is at present in one of the halls of the Federal palace at Caracas. By mistake some have called it "The Congress of Angostura." It is a picture of the war council held on May 23, 1819, in the town of Setonía where Bolívar explained to his generals the plan of the stupendous campaign of crossing the northern Andes. The meeting and the carrying out of the plan adopted were direct results of the Congress of Angostura.

necessary change of the authorities. Thus the Republic of the United Provinces of Venezuela came into being.

The first constitution of Venezuela was the expression of the mind of the men of letters in whom the thought and the spirit of the revolution dwelt. An evidence of the genuineness of their intentions, it was a digest of the most beautiful principles of democratic doctrines, and in theory a monument of political and social progress which might have been deemed inconceivable in Spanish America. It was, however, the fruit of doctrinal speculation without the clarifying assistance of experience. Put to the test by subsequent events, it could not survive on the angry waves that the revolution had stirred up in the heretofore almost dormant sea of the colony. The rural and illiterate classes, having been called by rights and, above all in fact, to a decisive activity, while acting in accordance with their instinct and ignorance, far from being the foundation of the Republic, became the direct instrument of its destruction. The new democracy perished by the action of its own internal forces, rather than because of its enemies from without.

"A son of Caracas escaped from its ruins, physical and political," at Cartagena de Indias, with that clear vision which ever was the guiding star of his purpose, analyzed the causes of the crumbling down of his country, and looking ahead, just as he always did until his death, for the interests of America, he warned the other colonies which were on the road to emancipation, of the dangers to which the sad experience of Venezuela clearly pointed. That very same son of Caracas becoming later through the power of his genius the armed leader of the revolution, patterned his political action on the counsel he had so clearly stated in his "Manifesto of Cartagena." While feeling the most profound respect for the ideal aspirations of a perfect democracy he did not lose sight for a moment of the well-established fact that when idealization misses contact with reality, failure ensues, and, what is much worse, the prestige of those very ideals is lost, for the success of which an ineffectual struggle has been waged.

Above all, he was always guided by the principle that anarchy does not lead to liberty; that the first condition of success lies in harmonious efforts; and that such a goal could not be reached except through a powerful authority, giving the Republic unity of will and unity of purpose.

Such was the political and military work of Bolivar from 1813 to 1819—to master the anarchical attempts of the idealistic patriots who overlooked reality, and to master the anarchical attempts of the patriotic leaders who sacrificed the ideals of the revolution to their personal viewpoint. Bolivar is the great unifier; and when the task had been done we find the idealists and men of action all united—those of the east with those of the south, the center, and the west. And when the revolution had achieved the dream of unification, and all were agreed as to its final purpose, it was then, and only then, that Bolivar deems the time ripe to recommence—as a basis, and at the same time, as a sign of the normal era which the Republic was triumphantly approaching—the onward march of republican institutions, and thus convokes the second Venezuelan congress, which was to meet in the historic city of Angostura.

With all the authority obtained at the cost of numberless sacrifices, firm in his belief, justified by six years' experience, Bolivar expresses once more the same fundamental ideas of the Manifesto of Cartagena and the Kingston Letter. This is a decisive moment for the fate of the young nation. Was there to be a repetition of those errors springing from a generous spirit which had already proved to be incapable of protecting and fostering the onward march of the revolution, or was the new era of regular government to rely on the wealth of experience gained through contrast, sacrifice, and failure? It would have been an unpardonable mistake to fall a prey to the same disappointing illusions of the Republic's first legislators. Eight years of strenuous life in the midst of the hardships of a war which did not tolerate indifference nor remissness, had definitely enlisted in political and social activities the classes

CORREO DEL ORINOCO.

N.º 19.

ANGOSTURA SABADO 20 DE FEBRERO DE 1819. 9

TOM. II.

CORREO BRAZILENSE.

Continuacion de la Refutacion del Correo BrazileNSE.

Supongamos que el rey Juan fuese indiferente á esta peticion; y veamos qual seria la conducta de sus Consejeros y Ministros. Bien sabida es la de todos los que sirven estas plazas en Gobiernos despoticos; pero para demostrar la de los empleados de la Corte del Brazil alegremos el dictamen del *Correo BrazileNSE*.

Confiesa que hay abusos, principalmente en la forma de la administracion pública del Brazil—que son necesarias muchas reformas tanto en lo legislativo, como en la administrativo—y que las leyes del Brazil, quando era colonia y despoblada, no convienen al Brazil descolonizado, poblado, y rico.

Dice que los hombres buenos y espirituosos son los que el Gobierno debe contemplar y convencerlos de sus intenciones de mejoramiento en las cosas públicas: porque la gente ignorante va con la corriente, y los empleados va hiladores del Gobierno ó egoistas no cuidan del bien general: con tal que reciban su sueldo y coman y beban descansados, todo lo demás les es indiferente. Los que estan en poder y autoridad, luego que les habla de reforma, temen perder sus comodidades, y de conguiente llaman revolucion toda reforma, y jacobinismo toda demonstracion de abuso. Perturbadores del sosiego público son llamados los que animados de patriotismo denuncian estos males; porque perturban la friccion de los malignos placeres de estos egoistas. Son senencias del *Correo BrazileNSE* en el mismo número que estamos impugnando.

Y si los que han de proveer la peticion, son esos mismos empleados, egoistas, y aduladores del Gobierno, que aborrecen y detestan la reforma? ¿como podrá ella tener lugar? Mas claro: el Gobierno se compone de estos mismos empleados; ellos son los que gobiernan á nombre del rey, y los mas opuestos á toda reforma que desquite su despotismo: ¿como pues esperar de ellos el suceso de la peticion? Si el rey fuese un hombre de virtud y talento extraordinario, tal vez provera contra el dictamen y voluntad de sus ministros y consultores; pero siendo tal, qual lo describio un papel Ingles despues de su emigracion al Brazil, nada de provecho podia esperarse de él. "Un hombre de escasos talentos, de un carácter debil é irresoluto, y enteramente entregado á sus favoritos. Asi está definido en...." *"A Sketch of the causes and consequences of the late emigration to the Brazils. By H. Rylance."*

"Ni la Filosofia, ni la revelacion pudieron enseñarle al Editor del *Correo BrazileNSE* que los hombres, creados á imagen y semejanza de Dios, debian depender de la voluntad, humor y pasión de un individuo tal como el que está reinando en el Brazil. Y quando fuese mas sabio que Salomon, mas fuerte que Hercules, y mas virtuoso que Trajano, tampoco tendria derecho para mandar á su antojo, y sin las trabas de una Constitucion dictada por el pueblo, ó sus representantes. Toda autoridad que no se derive de este principio, es ilegítima y tiránica. Todo Gobierno que no redunde en utilidad de los gobernados, debe ser abolido ó reformado. No se congregaron los hombres en sociedad para sacrificar sus derechos á

intereses á las comodidades y placeres de una sola persona ó familia; el mejor estado de todos los congregados, su salud y felicidad fué la mira de su congregacion. Es un crimen de blasfemia el decir que Dios, variando posteriormente sus designios en la creacion del hombre, lo destinó al servicio y utilidad de cierto número de sus semejantes, abatiendolo á la clase de los brutos, y demas cosas que hacen la propiedad de los ricos y se trasmiten á sus herederos. Estos son los efectos y estas las consecuencias de la falsa doctrina que hace derivar inmediatamente del Cielo el poder de los monarcas absolutos, despojando al pueblo de su soberania. Sobre esta falsa doctrina han girado los disparates que reproduce el *Correo BrazileNSE*, quando censura la revolucion de Pernambuco.

Adelantando su critica el escritor de este periódico, duda que hubiese elementos antiguos para esta empresa, y desde luego la llama obra del momento, parto de inconsideracion: se queja de la precipitacion, error, é injusticia de sus conductores; y los tacha de ignorantes en materias de Gobierno, administracion, y modo de conducir los negocios públicos; y no como quiera ignorantes, sino con una total ignorancia. Le contestaremos capitulo por capitulo.

Los antiguos elementos de toda revolucion tal como la de Pernambuco, no son otra cosa que los sentimientos naturales contra la opresion: el deseo innato de la libertad en el hombre es el resorte principal que da impulso á su maquina para recuperar sus derechos usurpados. Si estos nobles sentimientos no eran generales en todo el Brazil, al sistema de su Gobierno debe atribuirse esta mengua; al habito inveterado de las cadenas es imputable la indiferencia y apatia con que el pueblo las tolera, las besa, y las bendice. A esta degradacion brutal debio el despojo el que la mayor parte de los habitantes de aquellas Provincias se hubiesen declarado contra la revolucion, ofreciendo en obsequio del tirano, con la mayor prontitud posible, sus personas y bienes. Y de donde nace principalmente este embrutecimiento? De doctrinas tales como las del *Correo BrazileNSE*. Esta es la leche que maman quienes tienen la desgracia de nacer en monarquias tales como la de Portugal. A esta lactancia debe el Editor de aquel *Correo* la baxeza á que ha descendido su pluma, acusando á los Patriotas de Pernambuco, y tributando incienso á la Casa de Braganza.

De ella dice que es la mas popular que jamas gobernó á los Portugueses: que la revolucion de Pernambuco nada tenia de comun con el odio que se suponía contra la dinastia reinante: que en oposicion á los poquissimos facciosos que levantaron su descontento hasta el punto de rebelion, se podia allegar la inmensa mayoría, ó totalidad de los habitantes del Brazil que se declararon contra ellos, ofreciendo en defensa del rey sus personas y bienes con la mayor prontitud posible. Asi se explica en la pag. 210 del *Correo* de Febrero del año pasado, y así coopera á perpetuar la esclavitud de los Brazilenses.

Que fuese obra del momento la revolucion, parto de la inconsideracion, del error, y de la precipitacion, tanto quiere decir en el concepto del escritor como revolucion no bien meditada ni combinada. Pero quisiéramos que nos señalase en la historia de las revoluciones quales son las que han tenido buen éxito,

siempre que sus promotores han querido meditarlas y combinarlas del modo que pretende el *Correo BrazileNSE*. En la tardanza han peligrado todas las que se han preparado y madurado conforme al metodo que allí en su mente tenia concebido el Editor quando reprochaba la de Pernambuco. Todas las veces que prolongaba el tiempo de la erupcion para aumentar el número de adeptos y de medidas mas allá de lo que se acostumbraba en semejantes empresas, todo se ha malogrado por las delaciones y pérdidas de alguno de los confidentes. Los hombres buenos y espirituosos son en todas partes los que conciben y forman las revoluciones; en todas partes son pocos los individuos de esta calidad; ellos son los que debentrazar y ejecutar las operaciones insurreccionales contra el despotismo; el secreto de ellas no debe fiarse á la multitud: esta va con la corriente, y casi nunca dexa de seguir el grito y alarma de sus corifeos.

Nos valemos de la misma razon que alega el *Correo BrazileNSE* para decir que los hombres buenos y espirituosos son los que debe contemplar el Gobierno y convencerlos de sus intenciones de mejoramiento en las cosas públicas, porque la gente ignorante va con la corriente. Casi todas las revoluciones empiezan por el rompimiento de muy pocos individuos. Lease la del Duque de Braganza en Portugal, y se hallará comprobado el hecho; la de los Españoles contra Bonaparte fué iniciada por un puñado de gente en Madrid y por el grito de una verdulera; la de Venezuela contra las autoridades que se inclinaban á estar y pasar por las cesiones y abdicaciones de Bayona, no tuvo mas principio que el de un oficial que exclamó diciendo "Viva Fernando VII. y mueron los Franceses." La otra revolucion de Venezuela por su independencia y libertad fué obra de un número muy reducido de personas avocadas en la capital, y de muy pocas semanas de consorcio; la de España en Mayo de 1808, y la de Caracas en Julio del mismo año fueron obra del momento y no premeditadas. Parto de inconsideracion, de error, y precipitacion era la de España en el juicio de Napoleón, y sus partidarios; y la de toda la América insurrecta le mereció el mismo concepto á Fernando, y sus servidores. (Se continuará.)

LA MEDIACION

Conclusion de la Exposicion sobre la Mediation entre la España y la América.

Si Fernando se resuelve á esta grande operacion política, que puede costar dificultad al amor propio; pero no al del bien y de la Patria, se hallará de un solo paso transportado del siglo en que él vive al en que vive Europa, se dará á sí mismo y á su nacion una nueva existencia y cambiará á tiempo la faz de la Europa y del Mundo. — ¡Sombra de Henrique IV.! vuelte del Beirné antes que pase este rapido instante dando á tu Augusto Nieto para salvar ó para perder su trono y su país! — Eleva su imaginacion á la altura de tus ideas, muéstrale la senda de la gloria y del heroismo, hazle conocer el precio de un momento en que tan inmensos males pueden evitarse y tan inmensos bienes adquirirse, y excítalo en fin á adoptar las dos únicas medidas, de que depende la salud y el engrandecimiento de España! — Gobierno representativo y alianza con América, ¿de qué otra cosa necesita ella para levantarse de ese lecho de muerte y elevarse á un grado de poder y de prosperidad?

FACSIMILE OF NUMBER 19 OF

The "Correo del Orinoco," the first number of which appeared on the 27th of June, 1818, was edited by many of the the 20th of February, 1819, the beginning and the last part of the speech

"*Patría los beneficios de la libertad.*" Concluida su contestación pidió permiso para retirarse, y el Presidente se lo concedió, nombrando un Diputado de diez miembros para que lo acompañara.

En seguida se trató en el Congreso de nombrar un Presidente interino de la República; pero ocurriendo muchas dificultades para la elección, se acordó que el General BOLIVAR ejerciese este Poder por 24 ó lo más por 48 horas, y se mandó sin Duplicación á comunicarle esta resolución. El General contestó que solo por consideración á la urgencia admitía el cargo, baco la precisa condición de que solo fuese por el término prefijado.

Al siguiente día, después de largas discusiones, se reconoció unánimemente la absoluta necesidad de que en las actuales circunstancias continuase interinamente el General BOLIVAR en la Presidencia del Estado, y una Duplicación fué encargada de comunicarle esta determinación, manifestándole los poderosas razones en que se fundaba. No obstante insistió él en la negativa, y pidió exponer por escrito los motivos de su resistencia. Así lo verificó en el siguiente:—

OFICIO DEL GENERAL SIMÓN BOLIVAR AL CONGRESO DE VENEZUELA.

"*Señor Secretario del Congreso!*

"En este instante me ha honrado el Congreso Soberano con una segunda Duplicación presidida por el honorable Señor General URDASENA para anunciarme mi continuación en la Presidencia del Estado. Yo estoy confuso, me hallo oprimido con el cúmulo de sentimientos de respeto, consideración, y gratitud que me inspira la benevolencia del Soberano Congreso. Si no consultase mas que mi obediencia, y los votos de mi corazón volaría, como he sido invitado, á tomar posesión de la dignidad de Presidente de Venezuela; pero la convicción en que estoy de ser incapaz de llenar debidamente las obligaciones de primer Magistrado, me fuerza á representar sanamente las justas causas que me impiden servir á la República en el Poder Ejecutivo.

"Una dolorosa experiencia ha mostrado que incompetibles son las funciones de Magistrado, y de Defensor de la República: muchos reveses hemos sufrido por estar reunidos el Poder Militar y el Civil; pues que un hombre solo no puede atender á la conservación de la paz, y al ejercicio de la guerra, y un hombre solo difícilmente reane las virtudes y los talentos que requieren el Tribunal y el Campo. Además he reconocido en la práctica de los negocios públicos que mis fuerzas son insuficientes para soportar la formidable carga de un Estado Militar, y al mismo tiempo en la infancia. Los Representantes del Pueblo deben saber que apenas serían bastantes todas las facultades de todos nuestros Conciudadanos para componer un Gobierno reparador de tantas calamidades; ¿que podrá, pues, reparar un soldado?

"El Soberano Congreso ha nombrado un Vice-Presidente para suplir mi ausencia de la Capital. Yo debo estar siempre, por mandato, ausente de la residencia del Gobierno; por consiguiente este Vice-Presidente será siempre el primer Magistrado de la Nación; y siendo tan acertado y sabia la elección que ha recaído en el honorable Representante ZEA, actual Presidente del Congreso, yo me atrevo á rogar á los Representantes del Pueblo, se dignen admitir la respetuosa renuncia que hago de la Presidencia del Estado.

"Mi amor por la Patria y mi deseo por contribuir á la expulsión de los Tiranos de Venezuela me instan imperiosamente á representar lo que tengo el honor de comunicar á V.S.

"Dins guarde á V.S. muchos años. = Angostura á 16 de Febrero de 1819. 9.º. = BOLIVAR."

[Leida este Oficio en el Congreso, se suscitara diversas cuestiones, sobre que hubo largas discusiones, de las cuales el del resultado se dará noticia al publico por un Suplemento á esta Gaceta.]

"*ESPUESTA DEL SECRETARIO DEL CONGRESO AL GENERAL BOLIVAR.*

"*Excuso. Señor: No habiendo el Soberano Congreso Nacional, accedido á las repetidas renunciaciones de la Presidencia interina del Estado que se confirió á V.E. en la Sesión Ordinaria de ayer, y confirmado este nombramiento, y el de Vice-Presidente del mismo en la persona del Señor Diputado FRANCISCO ANTONIO ZEA, por la de hoy haiste que estos destinos sean constitucionalmente elegidos; y á consecuencia de la comunicación que á V.E.*

se hizo de esta deliberación, y teniendo en el jaramento dicho: ha acordado el Soberano Congreso se publiquen sus nombramientos: se haga salva de Artillería por ellos; y se mande lo más generalmente esta Capital por la noche de este día, y que al intento V.E. comunicó sus respectivos Ordenes á la Comandancia General.

"*Tenga el honor de transmitir á V.E. de órden del Soberano Congreso. = Dios guarde á V.E. muchos años. = Pálmira del Congreso en Angostura, 17 de Febrero de 1819. 9.º. = Razon. Señor es el Fiscal Secretario interino Diego Roscio. Urdaseña = Excuso. Señor Presidente de la República.*"

DISCURSO

Prounciado por el General BOLIVAR al Congreso general de Venezuela en el acto de su Instalación:—

"*Señor!*—Dichoso el Ciudadano que bace el escudo de las armas de su mando ha convocado la Soberanía Nacional, para que ejerza su voluntad absoluta! Yo, pues, me cuento entre los seres mas favorecidos de la Divina Providencia, ya que he tenido el honor de reunir á los Representantes del Pueblo de Venezuela en este Augusto Congreso, fuente de la Aino ideal legítima, depósito de la voluntad soberana y árbitro del Destino de la Nación.

"Al transmitir á los Representantes del Pueblo el Poder Supremo que se me habia confiado, colono los votos de mi corazón, los de mis Conciudadanos y los de nuestras futuras generaciones, que todo lo aspen de vuestra sabiduría, rectitud, y prudencia. Quando cumpla con este dulce deber, me liberto de la inmensa autoridad que me agobiaba como de la responsabilidad inlmitada que pesaba sobre mis débiles fuerzas. Solamente una necesidad forzosa unida á la voluntad imperiosa del Pueblo me habria sometido al terrible y peligroso encargo de Dictador Gefe Supremo de la República. Pero ya respiro devolviendoms esta autoridad, que con tanto riesgo, dificultad y pena he logrado mantener en medio de las tribulaciones mas horrosas que pueden afligir á un cuerpo social.

"No ha sido la época de la República, que he presidido, una mera tempestad política, ni una guerra sangrienta, ni una anarquía popular, ha sido, si, el desarrollo de todos los elementos desorganizadores: ha sido la inundación de un torrente infernal que ha sumergido la tierra de Venezuela. Un hombre y un hombre como yo! ¿que dices podría oponer al ímpetu de estas devastaciones?—En medio de este pelágo de angustias no he sido mas que un vil juguete del huracán revolucionario que me arrebatara como una débil paja. Yo no he podido hacer ni bien ni mal. Fuerzas irresistibles han dirigido la marcha de nuestros sucesos. Atribúimelos no sería justo, y sería darme una importancia que no merezco.

"Queréis conocer los autores de los acontecimientos pasados y del órden actual? Consultad los anales de España, de América, de Venezuela: exáminad las leyes de Indias, el regimen de los antiguos mandatarios, la influencia de la religion y del dominio extranjero: observad los primeros actos del Gobierno Republicano, la ferocidad de nuestros enemigos, y el carácter nacional. No me preguntéis sobre los efectos de estos trastornos para siempre lamentables, apenas se me puede suponer simple instrumento de los grandes móviles que han obrado sobre Venezuela. Sin embargo mi vida, mi conducta, todas mis acciones públicas y privadas están sujetas á la censura del pueblo. —Representantes! vosotros debéis juzgarlas. Yo someto la historia de mi mando á vuestra imparcial decision, nada añadiré para escusarla: ya he dicho quanto puede hacer mi apología. Si merezco vuestra aprobación habré alcanzado el sublime título de buen Ciudadano, preferible para mí al de Libertador que me dió Cundinamarca, y á los que el mundo entero puede darme."

"*Legisladores! Yo deposito en vuestras*

manos el mando Supremo de Venezuela.—
Vuestro es ahora el apostado deber de castigar á la felicidad de la República; en vuestra manos está la balanza de nuestros destinos, la medida de nuestra gloria: ellas sellarán los Decretos que ligen nuestra Libertad. En ese momento el Gefe Supremo de la República no es mas que un simple Ciudadano, y tal quiere quedar hasta la muerte. Servirá sin embargo en la carrera de las armas mientras halla enemigos en Venezuela. Multitud de beneméritos hijos tiene la Patria: capaces de dirigirla: talentos, virtudes, experiencia y quanto se requiere para mandar á hon bres libres, son el patrimonio de muchos de los que aquí representan el Pueblo, y fuera de ese Soberano Cuerpo se encuentran Ciudadanos que en todas épocas han mostrado valor para arrostrar los peligros, prudencia para evadirlos, y el arte en fin de gobernar y de gobernar á otros. Estos ilustres Barones merecerán, sin duda, los sufragios del Congreso y á ellos se encargará del Gobierno, que tan corajil y sinceramente acabo de renunciar para cumplir."

"La continuación de la actividad en un mismo individuo fuertemente ha sido el término de los Gobiernos Democráticos. Las repetidas elecciones son esenciales en los sistemas populares, por que nada es tan peligroso como dejar permanecer largo tiempo en un mismo Ciudadano el Poder. El Pueblo se acostumbra á obedecerle, y el se acostumbra á mandarlo, de donde se origina la usurpación y la tiranía. Un justo zelo es la garantía de la Libertad Republicana, y nuestros Ciudadanos deben temer con sobrada justicia que el mismo Magistrado, que los ha mandado mucho tiempo, los mande perpetuamente."

"Ya, pues, que por este acto de mi adhesión á la Libertad de Venezuela puedo aspirar á la gloria de ser contado entre sus mas fieles amantes; permítidme, Señor, que exponga con la franqueza de un verdadero Republicano mi respetuoso dictamen en este *Práguia de Constitución*, que me tomó la libertad de ejercer en testimonio de la sinceridad y del candor de mis sentimientos. Como se trata de la salud de todos, me atrevo á creer que tengo derecho para ser oido por los Representantes del Pueblo. Yo se muy bien que vuestra sabiduría no ha menester de consejos, y se también mi Proyecto acaso os pareciera erróneo, impracticable. Pero, Señor, aceptad con benignidad este trabajo, que mas bien es el tributo de mi sencilla sumisión al Congreso que el efecto de una leveza presumptuosa. Por otra parte, siendo varias funciones la creación de un cuerpo político, y aun se podría decir la creación de una sociedad entera, rodeada de todos los inconvenientes que presenta una situación la mas singular y difícil, quizás el grito de un Ciudadano puede advertir la presencia de un peligro oculto ó desconocido. (1.)

"*Legisladores!* Por el Proyecto de Constitución que reverentemente someto á vuestra sabiduría, observaré el espíritu que lo ha dictado. Al propneros la división de los Ciudadanos en activos y pasivos, he pretendido excitar la prosperidad nacional por las dos mas grandes palancas de la industria, el trabajo, y el saber. Estimulando estos dos poderosos resortes de la sociedad, se alcanza lo mas difícil entre los hombres, hacerlos benéficos y felices. Poniendo restricciones justas y prudentes en las Asambleas Primarias y Electorales, ponemos el primer Dique á la licencia popular, evitando la concurrencia tumultuaria y ciega que en todas elecciones ha imprimido el desacierto en las Elecciones, y ha ligado por consiguiente, el desacierto á los Magistrados. y á la murel del Gobierno; pues este acto por sí mismo, es el acto generativo de la Libertad, y de la Esclavitud de un Pueblo."

"*Aumentando en la balanza de los poderes el*

(1.) que en un acto de analoia me he comparado al interior de la República y del nuevo Proyecto presentado. Se ha creído conveniente suprimirlo, y solo solamente el principio y fin del Documento para que pueda imprimirse todo por separado.

THE "CORREO DEL ORINOCO."

most prominent men of Gran Colombia, such as Roscio, Zea, and Palacio Fajardo. In this number appearing on of Bolívar at the Congress of Angostura was printed for the first time.

constituting the majority of the population of Venezuela. They had to be accepted with their good qualities, their defects, their potential energies, their natural limitations. The idea was to establish a republic, not philosophic and abstract, but a concrete democracy whose subjects and direct agents stood out clearly and precisely in that midst. This is the wide difference existing between the exalted Congress of Angostura and the exalted Congress of 1811.

At the opening of the congress, Bolivar submits his report as to the exercise of the authority vested in him, which he surrenders to the representatives of the people. Having thus become a plain citizen, exalted because of the services rendered by him to the country and by his experience in such service, he addresses those in whose hands rests the future of the nation, and frankly asks of them all that he deems indispensable for the stability and happiness of Venezuela. He delves into history to find that the success of a government does not lie so much in its extrinsic form as in its harmonious relations with the people to be guided and led. Thus, even in praising with sincere enthusiasm the excellent features of democracy, he does not fail to admit that democracy is not per se the only factor in the welfare of nations; this must be sought for in something more permanent and deep than the outward form of a system of government. His conception of a political ideal is condensed in this doctrine: "the most perfect system of government is that which gives the greatest possible sum of happiness, the greatest sum of social security, and the greatest sum of political stability." But it is not possible to attain these ends when the status of the men for whom legislation is made, has been disregarded. Thus, after making an ingenuous analysis of the population of Venezuela, pointing out its characteristics, Bolivar emphatically advises against the thoughtless copying of the institutions of other peoples, no matter how far advanced they be in the matter of pure doctrine, and demands original measures to meet the needs of the people of Venezuela. Stability is his great anxiety. He is personally aware of the manner in which authority is challenged by the individualistic instinct which is latent in every one, but which develops in a violent manner among those who having distinguished themselves because of their qualifications, audacity or success, feel that they are fit to grasp such authority and exercise it. Bolivar fears anarchy as much as he fears tyranny, and his earnest desire is to safeguard the state against either of these extremes. Hence the idea of a hereditary senate, which in his own words "would be an intermediate power between the government and the people, that would blunt the shafts these two eternal rivals direct against each other." His entire system is inspired by the thought of the imperfections of the people and the risk there is in trusting them with instruments of government, by far too delicate for their uneducated, inexperienced hands. In everything Bolivar shows, besides the greatest appreciation for liberty as the acme of human aspirations, the fear, tempered by prudence, before the possibility that, in aiming at an impossible perfection, the effective benefits of a moderate and dignified freedom be sacrificed.

He desires, above all, as the foundation of public happiness, the formation of a national character, more effective than all the written laws. He proclaims union as the motto of the new-born Republic and urges "as the paramount care of the paternal love of congress," popular education. As a statesman he believes that nothing stable can be founded unless based on justice and righteousness, and exacts that morals be a part of the government of the people.

After earnestly requesting the adoption of these principles, Bolivar still finds new words, not merely to urge, but to beg for measures which are a consequence and crown of the great sacrifices he has undergone. "I leave to your sovereign decision the reform or abrogation of all my statutes and decrees; but I implore of you to confirm the absolute freedom of the slaves, as I would beg for my life and the life of the Republic." This is conclusively national unification, which otherwise would not



OFFICIALS OF THE STATE OF BOLÍVAR, VENEZUELA, WHO DIRECTED THE CENTENARY CELEBRATION OF THE CONGRESS OF ANGOSTURA.

By decree of March 10, 1917, the legislature of the state of Bolívar, whose capital was formerly Angostura, ordered the first centenary celebration of the Congress of Angostura. The decree was signed by the President of the Assembly, Sr. José Gaspar Machado Slegerte (2), grandson of Don José Tomás Machado, one of the representatives at the Congress of Angostura, and by Sr. Víctor Vicente Maldonado (3), secretary of the same body, and ratified by Gen. Marcelino Torres (1) and Dr. Víctor A. Rodríguez, President and Secretary, respectively, of the State of Bolívar. The other persons shown in the group are members of the legislature of the state of Bolívar.

be understood; it is the application of moral principles, and a safeguard against contingencies and social cataclysms.

Finally, the Liberator asks congress to sanction the grand political idea of the formation of a great State inspiring love and respect, with the necessary force to guarantee its own existence and to carry on its liberating action far beyond its frontiers.

The congress of Angostura fulfilled in a large measure the dreams of Bolivar; it was worthy of the trust and discharged a historic mission. A gathering of tried and illustrious men, the congress of Angostura was worthy the importance which the revolution had assumed, and in creating the powerful and splendid Republic of Colombia, it ceased to perform a Venezuelan task in order to fulfill an American mission.

After a century the political ideas of Bolivar appear to be endowed with that eternal life found in all that is drawn from nature by a deep and sincere mind. Leaving aside all that which circumstances of the moment bring into the thoughts of every statesman, there yet remains, as a store of teachings justified by the history of 100 years, a wealth of clear, consistent principles, still having the novelty and freshness of the most glowing political doctrines. It is toward the unity of national character; toward a just democracy, free from tyranny and jacobinic exaggeration; toward the apotheosis of morals as the only possible basis of social redemption and stability; toward the abolition of slavery, the homogeneity of peoples, and the effacement of caste; it is toward the community of continental interests, based on a harmonious conception of right, fraternity, and respect among all the nations of America; it is toward all these ideals which might have appeared to be dreams without foundation had they not been proclaimed by one who had already shown himself to be so capable in action as to secure the liberty of entire countries; it is toward these different goals that the peoples of America have been marching, some over wide, smooth, firm, and safe roads, others through difficult paths, between falls and blows, among precipices and chasms. Before the recent test to which humanity has seen civilization submitted, when it boasted of most admirable material progress, an awe-stricken world, its faith shattered, turns its eyes to that obsolete institution which, under the name of moral power, Bolivar brought to light "from the depths of obscure antiquity."

Does it, perchance, differ from the court of nations which, due to the happy inspiration of President Wilson, is to precede the supreme reign of justice among all peoples? Bolivar himself thought that some day "his ingenuous dream," improved through experience and knowledge, might become most efficacious.

May the memory forever linger of that day in which a great citizen of the world, inspired by a great ideal, divested by his own volition of the unlimited power he had exercised, asked the representatives of the people, as the reward for his invaluable services, to deign to grant his country "a government preeminently popular, preeminently just, preeminently moral, which would hold in chains oppression, anarchy, and guilt; a government which would allow righteousness, tolerance, peace to reign; a government which would cause equality and liberty to triumph under the protection of inexorable laws."



PULQUE AND OTHER MAGEY PRODUCTS¹ " "

THE peones claim it lends strength to their back muscles, and witnesses to the prodigious feats of these human trucks, the cargadores of Mexico, can say naught to the contrary: invalids suffering from Bright's disease, stomach, and bowel troubles, and nervous disorders give cheerful testimony to its efficacy as a panacea for all their ills, and their testimonials bear a silvery ring that carry conviction to the most doubtful: while the generous Mexican host, through all the disturbed annals of the country's history from the glorious reign of Moctezuma down to the present day, desires no richer offering wherewith to regale the guest within his gates as an aid in his effort to sustain the reputation of the far-famed hospitality of his people. As vodka to Russia, pisco to Peru, and sake to Japan, such is the relation that pulque bears to Mexico. Pulpue is the Mexican national drink, and is found nowhere else: and, despite the threatening clouds of prohibition looming up on the world's horizon, until a more profitable disposition can be made of the plant to which this beverage owes its being, the last, lingering echoes of the "Chin-chin" of the Chinese, the "Skold" of the Scandinavians, and the "Good health and prosperity" of the Yankees will have long since died away and been forgotten before the curtain is rung down on the expressive and soul-satisfying "Salud y pesetas" that is daily toasted over a bowl of fizzling pulque.

People everywhere know that pulque is a product of a species of the cactus, but comparatively few are acquainted with the general appearance of the liquid or are certain as to whether it is distilled or fermented: and still fewer have a correct knowledge of the extent to which the maguey plant may be utilized: for herein are found the means for food and drink, shelter, fuel, and clothing, as well as soaps, medicinal properties, and other products of necessary and daily employ. The maguey is the most highly prized heritage of the country just south of the Rio Grande; its multifarious supplies have satisfied the corresponding demands of the natives for centuries: and future generations are certain to sing its praises with still greater fervor when laboratory improvements and new discoveries place its beneficent properties within the reach of all mankind.

Closely related to the lily, the genus agave of the cactus family of plants numbers approximately 160 species, of which about 130

¹ By Luthur K. Zabriskie, vice consul of the United States of America at Mexico City.

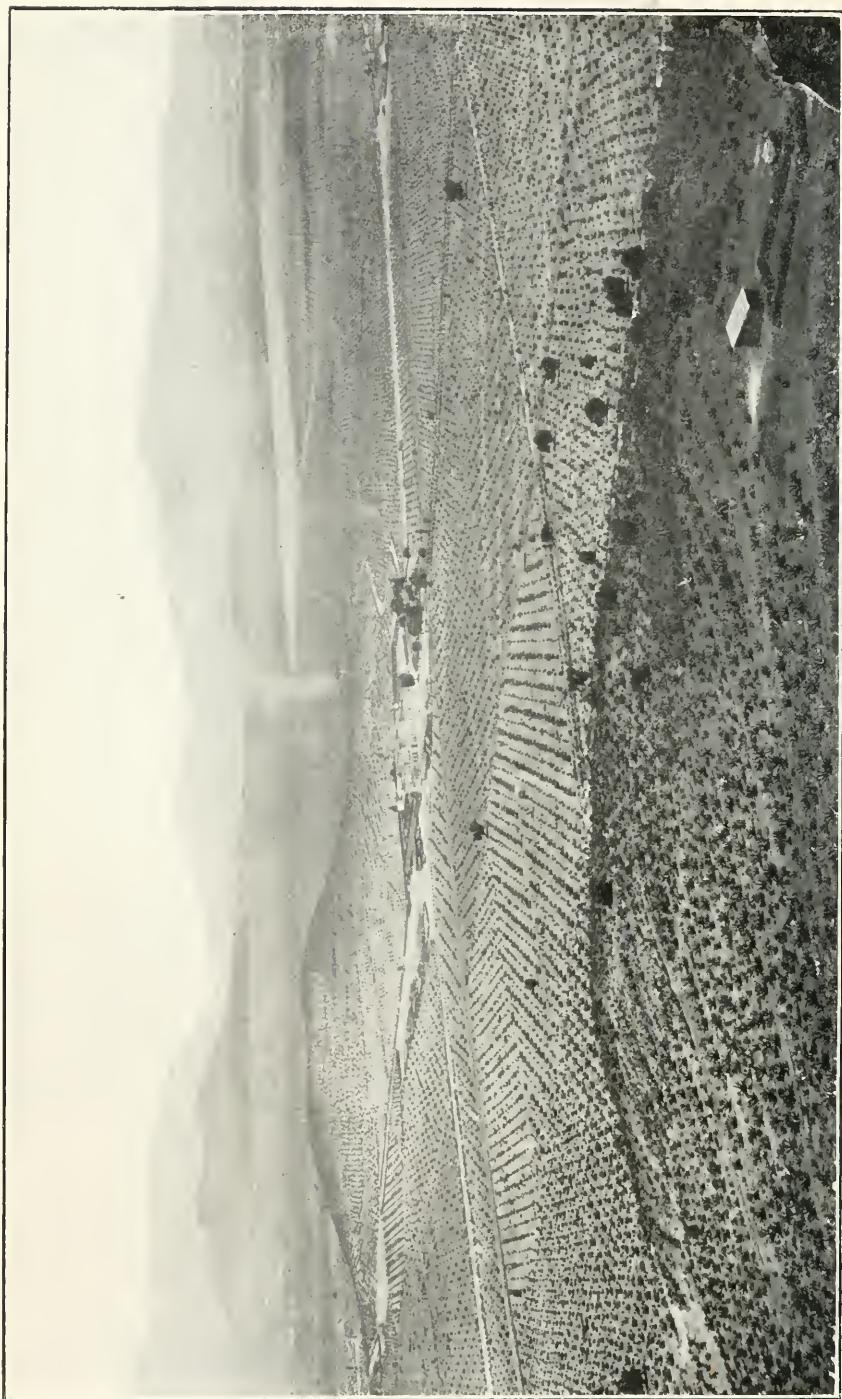


Photo by Waite, Mexico City.

MAGUEY HACIENDAS IN THE VALLEY OF MEXICO.

The maguey plants stretch for miles and miles in parallel rows across the mesa lands.



Photo by Waite, Mexico City.

THE Maguey IN FULL BLOOM.

This flower, the century plant of northern greenhouses, has a much more beautiful growth in its native habitat. The central stalk springs upward at the rate of 2 or 3 inches a day, sometimes to a height of 25 feet, and then throws out a cluster of wonderful golden blossoms.

are indigenous to Mexico. Two groups of the agave are popularly recognized here—the amoles and the magueys—which latter variety is subdivided into so-called pita magueys, mescal magueys, and pulque magueys. The pulque magueys claim only 10 out of the 160 species constituting the genus agave, and these are characterized by huge, fleshy leaves and by an abundance of sweet sap that appears at the period of maturity. This sap varies in quantity and quality with the varying conditions of season, altitude, soil, character of cultivation, etc.; but its culture reaches its highest development on the Mexican tablelands at an altitude ranging from 2,200 to 2,700 meters above sea level.

The fresh, unfermented sap of the pulque maguey, commonly designated in Mexico by the word aguamiel, is one of the most ancient remedies known to the Western Hemisphere, and the spread of its use and the consequent increase to its fame from age to age is chiefly attributable to the fact that up to the present day it is the only recognized power to radically and permanently overcome the dread ravages of Bright's disease. By reason of the fact that fresh aguamiel ferments very rapidly, and because all attempts to preserve it without alteration to its medicinal properties have until recently proved futile, its employ has necessarily been limited to the district wherein the plant is cultivated on a large scale, namely, in the valley of Mexico. Hence, physicians throughout the world have for years been sending patients suffering from kidney troubles, stomach affections, nervous disorders, and the like to the original source of aguamiel supply, where marvelous cures have been effected. This remedy is a powerful nutritive, being rich in the phosphates of magnesium, potassium, and calcium, as well as in a peculiar sugar called agavose, which is said to differ from all other sugars of the same group. Aguamiel has been employed by Mexican physicians and by the native population of the high mesa lands about Mexico City for centuries, in the treatment of urinary disorders, in cases of malnutrition, and as an aid to chronic and acute indigestion, as well as for making the national drink called pulque.

The existence of pulque dates from the remotest times, having been utilized by the Aztecs not only as a common beverage but also as a sacrificial libation. It is a watery, slightly viscous, chalky-looking fluid of a peculiar and not very agreeable odor and with a taste resembling that of sour apple cider. The liquid is perishable and should be consumed within a few hours; for if the fermentation is carried too far it turns into a thick, sirupy composition possessing a disagreeable taste and smell and with marked intoxicating effects. Taken fresh and in moderation pulque is not an ardent spirit, but when drunk to excess it appears to be a rather dangerous intoxicant



Photos by Waite, Mexico City.

THE MAGUEY PRODUCTS INDUSTRY OF MEXICO.

Upper picture: Cutting the leaves of the sisal agave in Yucatan. The workmen are gathering the fiber leaves to send to the mill. Lower picture: Extracting the pulque. The tlachiquero inserts a tube, made from a gourd with a hole at each end, into the incised heart of the plant, and sucks into it the secreted sap.



Photo by Waite, Mexico City.

CARRYING A LOAD OF PULQUE.

Pulque is usually conveyed in sheep or pig skins and carried to market on the back of a donkey. Some of these skins are provided with a valve at the nose aperture for conveniences of retail sale.

and is responsible for much of the criminality of the Mexican lower classes.

The estimated average daily consumption of pulque in Mexico City alone for the past 15 years is placed at 2,000 barrels, containing 250 liters to the barrel. Five pesos per barrel has been the usual price paid to the hacendado by the wholesaler, who, in addition, was obliged to pay to the Government another 5 pesos on every barrel imported as a kind of excise tax. The total cost to the city dealer, therefore, is 10 pesos per barrel in addition to the charges for hauling; and this is retailed at prices ranging from 8 to 12 centavos per liter. According to the terms of a recent law, after January 1, 1918, the Mexican Government will impose a tax of 7 pesos per barrel for the introduction of pulque and 5 pesos per barrel for its sale, there being demanded besides that sellers shall deposit the sum of 400 pesos with the proper Government authorities as a guarantee against infractions of the law. The pulque used for purely local consumption, along the highways and at the small pulquerias, is usually conveyed in sheepskins, whose wool has been closely shorn, which are turned inside out and calked with maguey fiber but not tanned. Some of these skins are provided with a cock and valve at the nose aperture for conveniences of retail sale. The manufacture of pulque skins is of itself a considerable industry, and is conducted by concerns locally known as colambrerías. In some localities these people are given Government protection by prohibitions against the shipment of pulque in any other class of receptacles. For long-distance transportation pulque is put into native-made barrels and sent by train aboard cars especially adapted for the purpose. The arrival of a pulque train in Mexico City, after having come as frequently happens over a long distance, is one of the interesting early morning sights. The latest statistics available on the subject show a yearly production of superior pulque for the whole of Mexico amounting to 3,177,344 hectoliters, which was valued at 6,053,558 pesos (one Mexican peso being nearly equal to \$0.50 United States currency); while the corresponding output of common pulque totaled 917,844 hectoliters, which was valued at 1,940,209 pesos. The most important pulque haciendas are found in the high-plateau States of Mexico, Puebla, Tlaxcala, and Hidalgo, the plains of Apam in the last-named State yielding the choicest product. Due to the certainty and regularity of the market, and the meager attention called for by the plant, the profits of a pulque farm are generally very large.

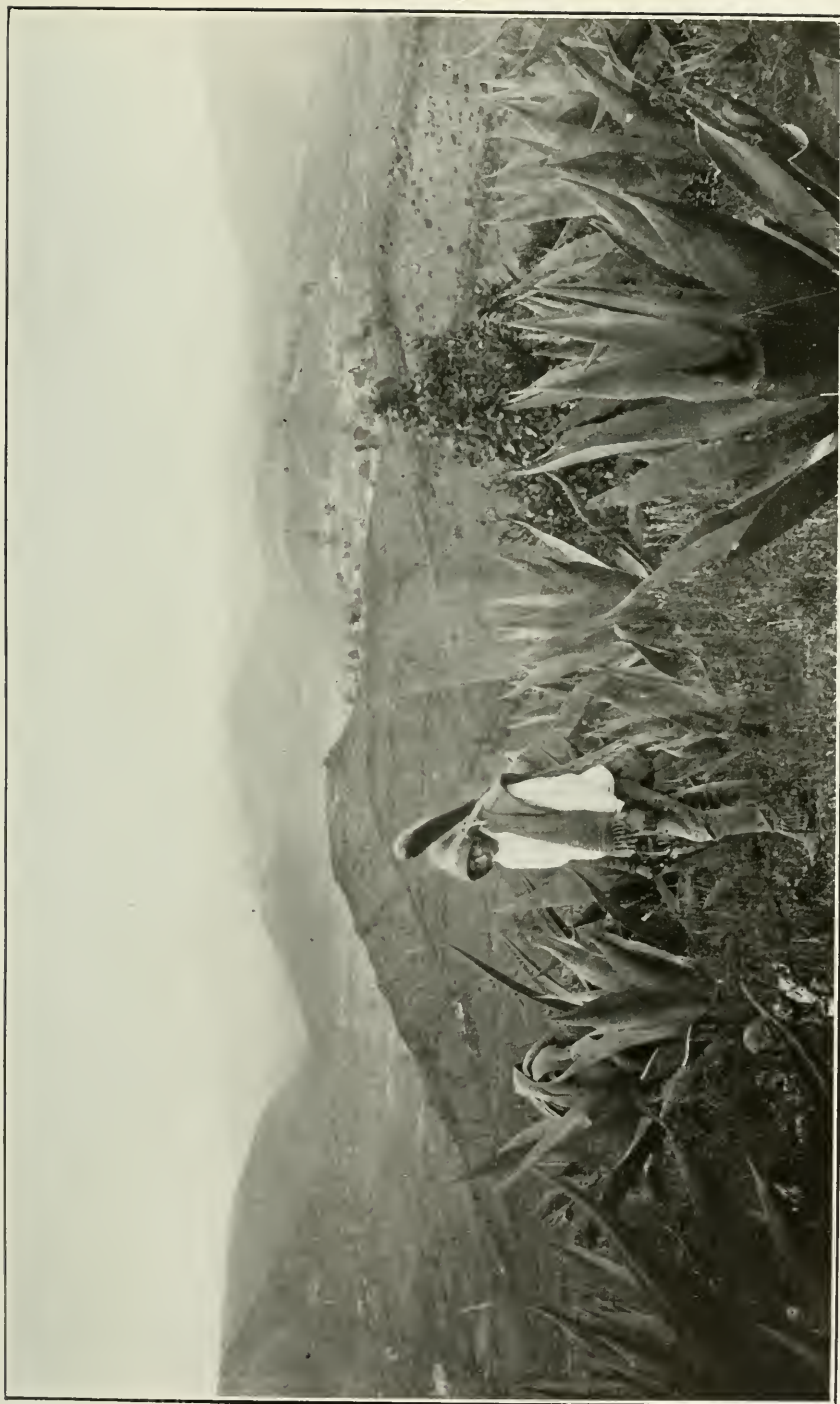
The cultivation of the maguey plant and the successive processes in the manufacture of pulque afford much that is of interest to the uninitiated. The ground is generally plowed at first but not manured, and the plants are set out in rows about 3 meters one way



Photo by Waite, Mexico City.

THE CULTIVATED PULQUE OR Maguey PLANT.

This photograph shows a maguey plant in full bloom. Barley and corn are frequently planted between the rows. The plant will flourish with comparatively little rainfall.



⌘ Photo by Waite, Mexico City.

THE TLACHIQUERO.

The man who extracts the juice from the heart of the maguey plant is called the tlachiquero. He carries his tube on his back and is generally accompanied by his faithful donkey.

by 4 meters the other. These original plants are the ratoons or suckers that spring from the root of an old plant, and are trimmed and wilted before the first planting in the nursery. When these have grown to about 3 feet in height they are again subjected to the root-trimming process, and, as a mere stump, are rudely thrown to the ground to wilt for two or three months, after which and just before the rainy season sets in they finally find their allotted place in the field. Barley and corn and such like are frequently planted in between the maguey rows, but excepting the benefits from this cultivation the maguey receives no special attention. The root of the maguey extends down into the earth only a short distance, but branches out 10 or 12 feet. A plant that has matured on properly plowed and rich soil may reach the proper age for tapping after four or five years, but seven years is the usual period. Field hands of experience can readily determine the proper time for tapping, when the central cluster of spear-like leaves is cut away (a process called castration) and the fleshy, truncated portion is rasped or scraped into a kind of hollow cup, which is covered with a flat stone or other suitable protection. The juice exudes naturally into the hollow and is removed twice every day for three or four months by the tlachiquero by means of an elongated gourd and a cow's horn, called tecomate, into which the juice is drawn by suction and then emptied into a sheep or goatskin receptacle which he carries on his back. Every few days the hollow in the plant is scraped afresh to foster the exudation of the juices. Under ordinary conditions a plant can be made to yield from 2 quarts to a gallon of aguamiel per day, but it rarely lives more than 120 days after the tapping process has begun. The total gross return from each plant to the hacendados has been estimated at from 12 to 14 pesos, which is no inconsiderable amount when one considers that it requires practically no care, is not subject to rainfall or other variable climatic conditions, and that many pulque haciendas claim from 500,000 to 3,000,000 plants.

The juices thus obtained are then conveyed by burros to the tinacal or vat shed, where they are strained through a primitive sieve of fiber and poured into ox-hide vats, which have been specially prepared for such service, and which are said to impart a particular flavor to the brew, where they are left to settle and ferment for several hours. To the liquor, now known as aguamiel (honey water), there are added scrapings of the pulp of the plant itself, which effect the desired ferment; and this fermentation, which begins almost immediately, is allowed to proceed for 16 days, when the pulque is ready for consumption. Thereafter, the daily quantities of pulque that are taken away are replaced with equal amounts of the aguamiel until a period showing bad fermentation sets in, when the same

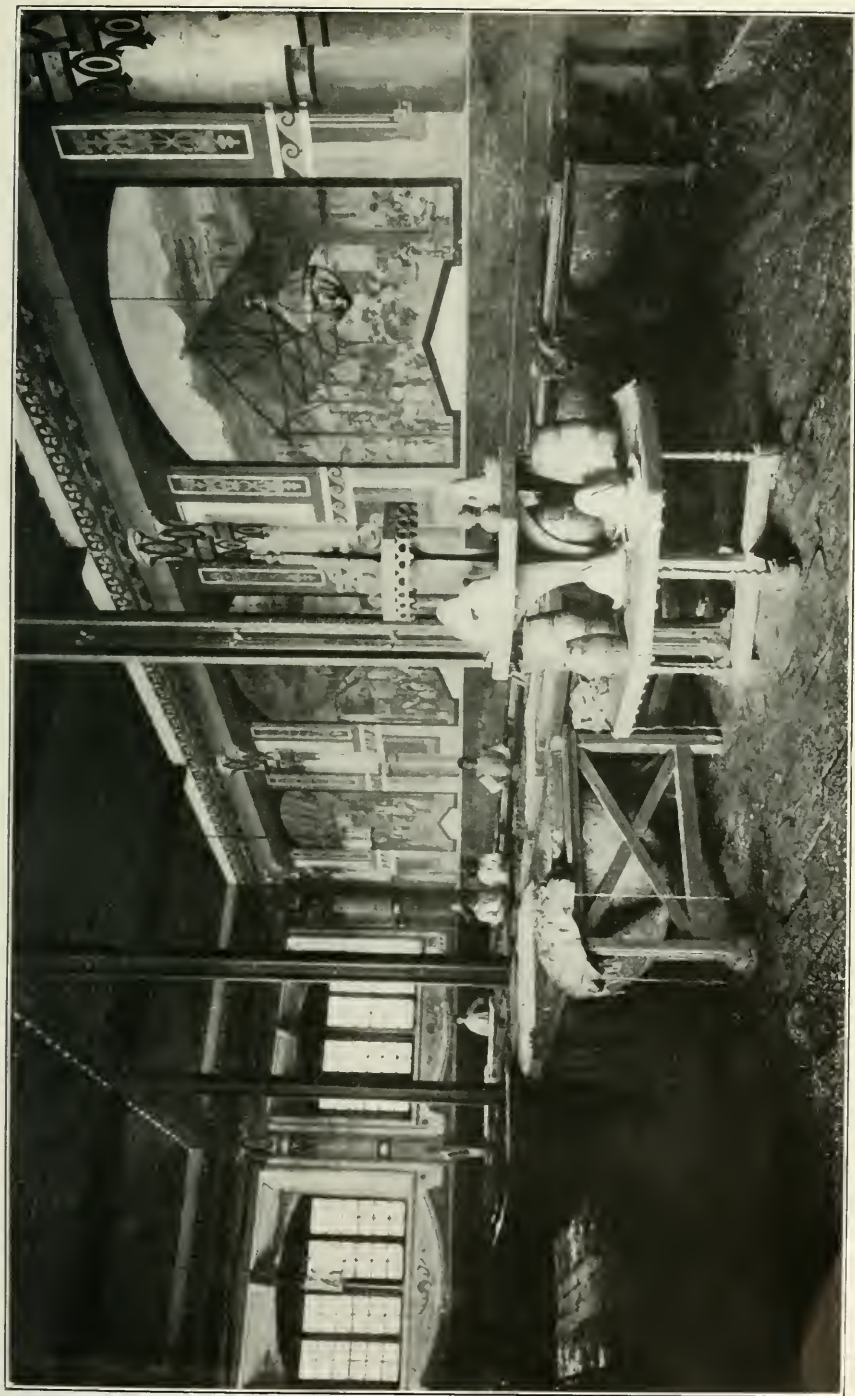


Photo by Waite, Mexico City.

INTERIOR OF A TINACAL.

Pulque, after being taken from the plants, is conveyed to the tinacal or vat shed, where it is strained through a sieve of fiber and poured into ox-hide vats, where it is left to settle and ferment for several hours.

process is repeated. Pulque has no foreign matter, and may be compared in this particular with our apple cider.

Mescal, or tequila as it is frequently styled, is also a product of the common or wild maguey or agave plant, but it is distilled instead of fermented, and corresponds to whisky with its powerful, intoxicating qualities. It sells at retail for about 1½ pesos per gallon. To-day the principal center of the mescal manufacture is found in the State of Jalisco, whose District of Tequila, where the best quality originates, has given to the liquor the name by which it is most commonly known. From 7 to 12 years are required for a plant to mature for the manufacture of the best tequila, and it is the bulbous root of the maguey that is used for this purpose. At the time of harvest these bulbs are stripped of all appendages, transported by burro to the distillery, where they are reduced by different methods, according to the machinery or mill, to a pulp which is left in vats to undergo alcoholic fermentation, following which the ferment is distilled. The quality of the liquor turned out is said to depend, first and foremost, upon the age of the plant (the older the plant the finer grade the tequila), and, secondly, upon the method of distilling. Frequently, the richer hacendados who make a specialty of tequila name their product after their hacienda.

While the fibrous outputs of the maguey are not as yet entitled to any distinct place among the recognized varieties of fibers, still its so-called center fiber is by no means despised, and the better kinds are employed, principally among the native folk, for the manufacture of coarse cloths and bagging, while the coarser strains are made up into rope, strings, handbags, baskets, and purses. Up to date no satisfactory machine has been devised to develop this fiber on account of the huge amount of gums the leaves exude, which render a long-continued machine operation on them impossible.

Other uses are made of the plant and its products, moreover, in addition to those mentioned in the foregoing relation. Shingles and sheathing for the cottages of the peasants are devised from the dried leaves; and these are also employed as dishes and cooking utensils, as well as for fuel, when they produce a splendid fire by reason of their rich oil content. Furthermore, the green leaves of the maguey, chopped up in small bits on the plan of our corn fodder, are regarded as a most excellent milk producer, and are regularly fed to dairy cows, who thrive well on this article of diet. The scrapings from the inside of the plant yield gratifying results when given to fattening hogs, which are styled in Mexico as "the poor man's savings bank"; and a change from mother's milk to the sweet aguamiel always calls forth gurgles of delight from the 6-months old youngster. In olden times a parchment was made from the leaves of the maguey



"SALUD Y PESETAS."

"Salud y pesetas" is the Mexican toast wherever two or more are gathered together to drink a glass of pulque. The native Mexican Indians claim it as their ancestral beverage and it is drunk fresh and comparatively pure with no bad results. In Mexico City the average daily consumption of pulque is estimated at 2,000 barrels.

for writing purposes; and even at the present day the needle and thread that are extracted from the center shoot of the plant by a skillful tlachiquero serves as a satisfactory substitute for the real article for every-day working purposes. The stalk or stump of the maguey plant is commonly found taking the place of a chair in the humbler dwellings; or, with the inside of one end scooped out, it furnishes a most attractive flower pot. Certain portions of the roots and leaves of the amole family of the cactus are sold in the markets throughout Mexico as a substitute for soap; and the fundamentals for numerous medicinal concoctions are herewith provided also. Maguey sirup is to the Mexican as maple sirup is to the Vermonter, while its sugar, though not produced just now in any considerable quantities, is of a very fine quality; and its opposite output, the maguey vinegar, ranks high with Mexicans and foreigners alike.

The guzano de maguey, or maguey worm, is the result of a butterfly sting on the leaf of the plant, and when full grown it is about 2 inches long by one-half of an inch broad, and resembles our white grub worm in general appearance. These might also be included in the list of maguey products; for they are fried in butter and eaten by a numerous group, many of whom prefer to see no more delectable dish set before them.

Consequently, the Mexican dreads the advent of a world-wide prohibition wave, which must surely compel him to burn the upturned maguey as so much worthless stubble, and to hang on the wall of his tinacal as a memento of blissful by-gone days the tecomate which he has handled for so many years in the gathering of the delicious aguamiel. The red-cheeked maiden, who has lived all her days in a maguey-leaf cottage, who has never worn a better frock than that provided by the maguey fiber, and who, as a little girl, learned her first sewing lesson with a maguey thorn and its attendant fiber thread, will likewise lament the radical change. A violent transformation of life and customs must ensue if the favorite beverage of the common people is placed under the ban; but it will be felt most keenly by the brawn and sinew of the mesa lands, who, at the present day, with but 6 centavos left in the folds of his blue jeans, is able to join a thirsty comrade at the bar and say, "Have one on me."



EXPORTING TO LATIN AMERICA

PART II.

SELLING.

THE SALESMAN.—No one can be successful in the Latin American markets who believes that there are peculiarities in Latin American temperament or in ways of conducting business which require short cuts, cure-alls, panaceas, or nostrums of any kind. The man who thinks that “jollyng” is the secret of Latin American selling had better stay at home; in fact, if he believes that there is any secret, he is unfit for the enterprise. Courtesy, of course, is requisite, but no good business man needs to be told that. A certain degree of ceremony is more common and there is more deliberation and less haste in concluding transactions, but this is all seen and comprehended at the first glance. The salesman must be flexible, able to accommodate himself to the mood of his customer; but if he is not that then he is not a salesman anywhere, at home or abroad. Latin America is no place for cast-offs or failures, and it is not an especially good field for experiments, but least of all is it a field for the man with “special qualifications.” The salesman must be courteous and considerate, but he must avoid the error of being extreme, and so leading his customer into believing he is being played upon or aped. It is seldom safe, least of all for a Yankee, to play out of character. The Latin American is naturally courteous and a bit ceremonious. Occasionally he appreciates a slight touch of the same in the Yankee, but not too much. To his keen perception even a little bit may seem strained and more is certain to produce nausea and a feeling that he is being mocked. In Latin America it is much better for a salesman to be an out-and-out boor, if boorishness be natural, than to attempt being “simpatico” and end in being “de pacotilla.”

The market.—A prospective exporter must consider many things before he commits himself to entering the foreign field. First among these is the question whether in this field there be a market for the particular article he manufactures or proposes to export. This is something about which more has been written and less of it worth while than about almost any other subject. The reason for this is not that those who write are not well informed, for some of them are, but that they attempt to answer the question in a way that no such

¹ By William C. Wells, of Pan American Union Staff.

question can be intelligently answered: that is, with a list by name of articles salable in the export territory. A man may be equipped with sufficient general knowledge of the principles of international trade and particular and technical knowledge of some one or more manufacturing industries, and he may have in addition a complete knowledge of the foreign field where it is proposed to exploit the products of these industries; and yet a list of goods, salable in this field, prepared by such a man, is worthless, and even worse than worthless, misleading to everyone except to the owner of the particular factory which was in the mind of the maker of the list. You may, if you be equipped as indicated, advise Smith & Co., manufacturers of furniture, with entire confidence what of their products are salable in China or Peru, and you may be able to indicate necessary changes or new articles of furniture suitable for these markets, but you can not prepare a list of chairs, desks, tables, etc., particularized or general, which can be of any service to Brown & Co., or to the hundreds of other furniture manufacturers who may be expected to read the list. But it may be possible to present the subject so that all furniture manufacturers can derive profit from the presentation.

In nearly every case where the question is propounded whether goods of a certain character are salable in a particular foreign market, the propounder of the question, himself a manufacturer or prospective exporter, is better qualified to answer the question than anyone else; or, rather, it would be more correct to say that of the elements which must be taken into consideration in answering the question the greater number and the more weighty are those which he knows better than anyone else can know. The province of the foreign-trade adviser is to supply the incidental facts which may serve to bring into relief that which is already known to the manufacturer or exporter.

But one says, "I am a manufacturer of roll-top desks. I have never sold any desks abroad and I want to know whether I can sell my desks in Brazil or Argentina. It seems nonsense to me to say that I, who have never been outside the United States, know more about this problem than you who have spent half your life in these countries engaged in studying the trade. What do I know about the market there, about what kind of desks they use, where they get them, and what they pay for them?" The answer is that one may know all about what kinds of desks are used in Brazil and Argentina, where they come from, and what they cost and yet be no nearer the solution of the problem, which is whether you can sell your desks in these countries, than if he, like you, had never been there. One must know whether your roll-top desk is as good or better than that of some one else, for this someone already is, or may be, your competitor. One must know what difficulties you find here at home in meeting the competition of flat-top desks. One finds all kinds of desks in Latin America—roll-top desks, flat-top desks,

desks with legs and desks without legs, metal desks and wooden desks—just as he finds the same here in the United States. The only difference is that here nearly all desks are of domestic make and there nearly all are imported, a large proportion from the United States. Among all the varieties of desks one finds here or there, no one except yourself or some other desk manufacturer can say what is the appeal of any particular kind of desk as against some other kind to the user of the desk. If the desk has won against competition here it will win against the same kind of competition there. If this competition, as it often is in Latin America, is with a foreign (European) desk manufacturer, then you must go to Europe and find out how your factory methods, your output, your invention, compare with European. After all, it may not be necessary for you to seek information in Europe, which in all probability you could not obtain of a kind having any value, even less so than you could obtain the same kind of information as to your competitors here. You can find out what the European is doing in desks in the same way that you find out what your competitors here are doing—that is, by statistical results. You know that your factory and selling methods, your invention, your output, are as good as your neighbor, Brown's, not because Brown allows you to inspect his factory, question his employees and examine his books, but because you successfully meet Brown's competition in the selling market. It is just here that the foreign trade adviser, if he knows the statistical facts, can be of service to you. He can tell you if Brown is selling desks in Brazil and Argentina, and that is all that he needs to tell you. That fact—viz, that Brown does sell his desks there—is the one fact, and the only one, necessary to bring into relief all the other pertinent facts within your own knowledge, which go to answer the question affirmatively that your desks can be sold in Brazil or Argentina. It makes no difference that Brown's desk is a flat top and yours a roll top. Roll tops and flat tops compete there just as they do here. The appeal of the one over the other to the desk user is the same. It makes no difference that the English or French desk has legs and yours and Brown's have not. The appeal pro or con of legs and no legs is just the same as of flat tops and roll tops. The important thing is that the American desk, no matter what its form, has in Rio or Buenos Aires met the competition of the European desk whether of the same or a different form.

But suppose, on the other hand, the American desk has not been able to enter the field, that Brown and other desk exporters have failed, then, unless you are quite sure that in invention, factory methods, and output you have a very considerable advantage over Brown and the others, you may safely conclude that the European has in these matters, advantage over all American desk manufacturers, and you had better stay out of the export field.

Ability to compete with the foreign manufacturer in quality, style, and price is the basis of success in the foreign field, and in no way is this ability better discoverable than from the results obtained by others with whose work and methods it is possible to measure one's self.

If the article be one of new manufacture, in which case there would be no statistical standard to apply, one must trust to his judgment. If his faith is well founded that the world which he knows—the United States—has need for the new article he is about to offer it, then he may be sure that other worlds, in all probability, have a like need. The new things, when they were new, the sewing machine, the cash register, the automobile, the moving picture, were seized on by Latin America just as soon as it was given the opportunity. The new inventions of the future, whatever they may be, will be seized on in the same way provided that they have the element of appeal that these inventions have had.

Within certain limitations anything which has a market in the United States has also a market in Latin America. If it be a new article of manufacture and serves a useful purpose, its appeal there is just as forceful as its appeal here. Advice which takes the form of an enumeration of articles which may have a market in this field is not intelligently given, because it can not be intelligently applied. Furthermore, if, as it usually is, it is merely an enumeration of articles bought and sold in Latin America, it misses the point of change of styles and methods of manufacture—in other words, the ever changing effects of invention and progress—and, what is of even more weight, it offers no basis upon which to estimate the strength of the competition which the prospective exporter must meet.

It is not sufficient to tell the exporter that people in Latin America are wearing shoes or hats or coats or that they have locks on their front doors—he might have guessed this without help—you must tell him something more, and perhaps the best way to do this is not to enumerate the articles at all, but to propound a formula such as: Everything is salable in Latin America except those things which do not fit in with the climate or with the industrial development of the several countries. All market differences, with the rarest exceptions and these the most apparent, which have any weight can be brought under one of these two heads: Difference of climate; difference of industrial development. All other differences, such as race, habits, culture, language, customs, temperament, or ethics may be brushed aside as having no worth while bearing in one case of a thousand. Where these things have a bearing, it is direct and apparent, and where it is not so, then it may be discarded. To illustrate: One sees at a glance that language must have a weight when the question is one of selling printed books. No one need expect a large market for English books in a Spanish-speaking country. The language difference is in this case direct and apparent. On the other

hand, when it comes to selling furniture, shoes, clothing, tools, machinery, etc., while there is no apparent and direct bearing of differences of habits, customs, race, etc., yet the prospective exporter at the beginning is almost sure to expect some hidden obstacle. He is almost sure to reason somewhat along this line: "People who speak a different language, whose habits are different, and whose race is different are certainly going to want and to demand products unlike those wanted and demanded by the people I know here at home." Not so; the experience of a thousand exporters and manufacturers here and in Europe has proven just the contrary to be the general rule. If the difference be one the bearing of which anybody, whether he knows much about Latin America or not, can see and appreciate at the first glance, then heed it; but if, on the contrary, it be one, the bearing of which must be reasoned out, sought for, or inquired about, then it is safe to assume that no such bearing exists.

None of the Latin American countries are manufacturing countries, and consequently have no domestic standards of manufacture. Their standards are all those of the United States, England, France, Germany, and other manufacturing countries.

The real differences which do limit the kinds of goods which are salable in Latin American countries are those due to differences of climate and of industrial development. There should be no real difficulty in the mind of any prospective exporter to know precisely the extent to which climate, hot or cold, wet or dry, limits or facilitates the sale of his product. In some cases it has a large influence and in others it has little or none. No one could expect to sell fur coats, house-heating appliances, and ice skates in hot tropical countries; nor raincoats in northern Chile, where it does not rain; nor distemper paints in Pará, where it rains too much; and yet he might expect to sell the same kind of table cutlery anywhere. In determining the effect of climate on the salability of goods of a certain kind, one should discard all statistical information of every kind except geographical. One should apply the same set of facts to the problem of climate effect in the foreign field as he would apply at home to what is precisely the same problem—i. e., differences in salability of given articles in Maine and in Florida or in Minnesota and in Arizona. A good commercial geography is all one needs, and the less it dogmatizes about trade and commerce and the closer it sticks to the facts of temperature, rainfall, and altitudes the better it is.

Climate limits not only the articles themselves, like raincoats and ice skates, but it limits also qualities and especially protective coverings and containers. One need not consider the kind of glue for joining furniture if the furniture is intended for Antofagasta, Iquique, or Lima. Any kind of glue strong enough to answer the purpose will do for these cities where rain never or seldom falls and where the atmosphere is always dry. But it is a different problem if the fur-

niture goes to Pernambuco or Manãos, where the air is heavy with moisture and rainfall is excessive. So it is with varnishes, paints, metal plating, and all other protective or ornamental coverings or dressings—heat, cold, and moisture must be taken into consideration. The intelligent and successful manufacturer will not allow himself to be pulled this way or that way by opinions or advice about how to prepare his product for a certain Latin American or any other market except this advice goes directly to the point—rainfall, temperature, altitude.

The second set of differences which do limit the kinds of goods which are salable in Latin America are those due to differences of industrial development.

In reality these are as simple of application as the climatic differences, but they are not so easily ascertained. They are facts that require a thorough and intimate acquaintance with all of the 20 countries in order to be able to appraise them at their true value. Fortunately, however, there are a few broad, general conditions which can be stated and which suffice in most cases, but not in all. There are exceptions and these occur often in unlooked-for places.

One must remember that differences in industrial development do not affect many things; that most articles are salable anywhere without respect to the differences in industrial development between the United States and Latin America as a whole, or the differences between Brazil and Argentina in the part. Climate has a much broader effect in differentiating trade than has industrial development. Climate touches more things, but not often so vitally as does industrial development. It is rare that climate of itself excludes articles; for the most part it acts as a modifier and can be circumvented and is circumvented. But industrial development, narrower in its application, is more vital when it does apply. If grain is not grown there is no need for drills and binders, and nothing except a change in the industrial situation can create such a need. If there are no minerals to mine then mining machinery can not be marketable. If there are no factories then products and materials which only such factories can use are not needed. Nothing short of industrial change can alter these facts. But one may ask, "After all, is not industrial development but another phase, a resultant, of climate and other natural causes?" In a limited view, yes. But this view when applied to commerce is confusing, because it fails to take into account man himself and the extent to which he is master of his environment. It is perfectly simple to treat climate and other natural conditions on the one side and industrial development on the other side, as entirely distinct. The one is nature unsubdued; the other the handiwork of man, by grace of or in spite of nature. Imports are restricted by both sets of conditions.

The Latin American countries are not manufacturing countries; that is, they are not such in the way that England and the United

States are manufacturing countries. The big power plant is almost nonexistent, but the hand trades and repair and assembly shops are much in evidence. These facts determine the kind and character of many kinds of imports. If one will keep clearly before him the use, or, it may be, the identity of the user, of any commodity, he need have but little difficulty in saying whether or not this commodity is salable in Latin America. For example, take the case of automobiles. Climate or industrial development can have little direct bearing on the automobile. It supplies a need and a want in any country in the world, and is salable anywhere. But what of automobile parts and accessories? One must draw distinctions resulting from differences in industrial development. The manufacturer of such automobile parts which enter into manufacture and can only be used by the manufacturer need expect no market for such products in Latin America, because there are no automobile factories in any of the countries. (There is at present one, and soon may be more automobile assembly plants.) On the contrary, the manufacturer of parts which can be set in place by repair shops or by the owner himself can expect a market proportionate to the market for automobiles. So it runs through all the trades. If the user of the commodity be the ultimate consumer—that is, if it be something in a finished state like a sewing machine, an automobile, or a pair of shoes; or if the commodity be something that a handicraftman, a small shop, or a repair man can make use of, like leather, wagon spokes, hubs, spark plugs, tires, paints—then all of these things are salable. On the other hand, if it be raw or even finished material of a kind which the handicraftman or small shop can not use, then in all probability Latin America offers no market for the product in that form. There are exceptions, however.

Advertising.—At the beginning one must know that advertising goes farther in Latin America than it does in the United States. A dollar spent in printer's ink will show a larger return than several dollars spent in the United States. Latin America has not been overfed with advertising. But to be successful the advertising must be intelligently placed. Here, as in other cases, one must discard all notions that there are peculiarities, short cuts, or tricks about Latin American advertising. The closer one follows well tried-out methods as applied in the United States the more successful will be the results in Latin America in the application of the same methods. Not every article is advertised here in the same way nor through the same agencies of publicity. One manufacturer finds that the billboard is of no service to him, while the daily newspaper is. Another finds the monthly magazine the best medium. Another that demonstration work counts most. Another depends upon the circular letter or the pamphlet. What is the cause of this variety in advertising? Answer this question, and every successful advertiser does answer it for his own product, and you have the secret of successful advertis-

ing in the United States and at the same time the secret for Latin America. The same agencies are there as here, and the human appeal of the advertisement is exactly the same and comes from the same direction. If the daily newspaper is the best medium to advertise a certain product here, the corresponding newspaper will be the best medium there. And so as to every other agency. Find out among what classes the newspaper circulates, and if this is the class one wishes to reach then advertise in that paper; if not, then find the newspaper that does reach the right class. If some new scheme or some new medium for advertising in Latin America is proposed, reject it or accept it solely for the same reasons that one would reject or accept the same scheme for advertising the same product in the United States. There is no safer rule than this; in fact, there is no other intelligent rule.

Language, use of technical and trade terms.—Portuguese is the language of Brazil and French of Haiti. The remaining 18 Latin American countries are Spanish speaking. One is often asked the question whether it be not possible to do business in Latin America without a knowledge of any other language than English. It is possible to the same degree, and to no greater, that it is possible to do business in the United States without a knowledge of English; but this is so heavy a handicap that no sensible person would want to take it up unless he were compelled to do so. There are cases, however, where the nature of the business is such that only one person (or one of a class) is competent to act, and this person does not know Spanish, then one must do the best he can and employ the services of an interpreter. Occasionally in Latin America he may find some one with whom he wishes to do business who knows English, but this can not be depended on there any more than the corresponding condition can be depended on here. Nothing takes the place of a knowledge of the language of the country. The fact that some Latin Americans know English, or that there are some British or American foreign traders in Latin America, does not in any very material degree do away with the need for Spanish in 18 of the countries, and for Portuguese in Brazil, or French in Haiti. In other words, English or German or French or Italian no more takes the place of the country's language in Latin America than does any of them, or Spanish, take the place of English in the United States. It is true that English is of more value than any other foreign language in Latin America, but one must not lose sight of the fact that it is a foreign language.

Spanish and Portuguese are nearly related languages, both based upon the Latin and having many identities, so that it is comparatively easy for any one speaking the one language to acquire the other. Notwithstanding, one must be very careful, especially in Brazil, not to appear to confound the two languages. There is nothing that a Brazilian resents more quickly or more decisively than this.

He takes the position, and quite correctly, that if he knows Spanish it is because he has acquired the language in just the same way as he may have acquired French or English, and not because his own tongue, Portuguese, is so near akin to Spanish that any one knowing one must of necessity know the other. Furthermore, the assumption to him smacks of the belief that Portuguese is but a dialect of Spanish. One must under no circumstances write letters or send circular advertisements to Brazil in Spanish. If one can not secure a Portuguese translation for such correspondence or for labels on goods, then it is better to use English or some other language, but in no case Spanish. In Haiti the case is different, there is no prejudice whatever against Spanish or any other language, but very few people understand any other European tongue than French. Next to French, English goes furthest in Haiti.

In the translation of technical and trade terms one can not lay down any general rules which can be of much service, except to say that in advertising and correspondence not enough attention is given to these matters. Advertisers generally do appreciate the fact that Spanish and Portuguese translations should be correct from the literary point of view, but they are prone to overlook the fact that the technical and trade point is of equal and often of more importance. To call a thing by a name which no Spanish-speaking person can recognize merely because that name is the literal rendering of the English word is an absurdity, but one which crops out in nearly all the Spanish and Portuguese translations made in the United States for circulation in Latin America. The fault of course is primarily in the translator to whom the manufacturer or exporter has intrusted the work and on whom he must rely. But the manufacturer should know that in translation two things are necessary: a knowledge of the language and a knowledge of the thing itself and that it is scarcely ever possible to find a single man equipped in both branches of knowledge. No man, native-born Spaniard though he be, and perfect in both Spanish and English, can make anything except a ridiculous mess of translating electrical goods catalogues or machinery catalogues unless he knows as much about the subject matter of the catalogue as the man who wrote it in English knew. A literary knowledge of English is not sufficient to steer one clear of using mechanical and trade terms incorrectly in English, nor is a like knowledge of Spanish sufficient in avoiding the like mistakes in Spanish.

One asks, What must be done if, as seems impossible, a Spanish or Portuguese translator can not be found equipped on both the literary and the technical side? The answer is that very much has already been done when one appreciates the fact that such translators are not to be had, more when the translator himself appreciates his lack of technical equipment. It is then possible to detail two men on the job who, if they work together sympathetically, may expect to turn out something which, although it may contain minor flaws,

is yet understandable and not ridiculously incomprehensible, as much of such advertisement at the present time is. One man must be the ordinary translator with a correct literary knowledge of the language—it is assured that such a one can be quite readily found—and the second must be a man taken from the business itself who knows the use, purpose, and proper designation in English of every article and every part described in the advertisement—it is assumed that this man knows no Spanish. The first man can never be trusted to work out the problem alone; he must have the second at his elbow to explain and reexplain the make, the use, and the purpose of every article set out in the English copy. One can test out this idea very easily if he be, for example, the manufacturer of grain drills. Let him show his catalogue and advertising descriptions to his next-door neighbor, a college professor, a doctor, a lawyer, or anybody except a farmer or an implement dealer, and observe what his neighbor makes out of the advertisement. Ask this neighbor to put down in his own language, after having read the advertisement but without referring to it, what the grain drill is and what it is used for, and like as not he will receive the astonishing information that grain drills are agricultural implements intended for harvesting wheat. Remember that the Spanish translator has the added difficulty of having to render all this into another language.

What is known in English as a monkey wrench is in Spanish an English key (*llave inglesa*). The writer has seen an implement catalogue in Spanish prepared in the United States in which a monkey wrench is given a literal translation (*torno de mono*). Such a ridiculous mistake as this could not have been made if the manufacturer had explained to the translator what the implement was and what it was used for. The Spanish translator, even though he knew little about tools, would no doubt in that case have recognized the implement as an English key used for screwing or unscrewing bolts and not something to put in a monkey cage.

Inaugurating business.—What agencies shall one use and how? The answer is: In the same way that the particular business was inaugurated at home and through identical agencies. One would not undertake the introduction of a new patent medicine, a new weave or design in textiles, and a novelty in building hardware all on the same lines. The appeal is different, the buying public is different, the channels through which the public buys are different, a different kind of advertising is needed; in fact, the whole selling scheme must be differently planned in each case. Then, again, when one considers the proportion of expense to the volume of business, he can not afford the same expenditure for traveling salesman and advertising if it is a case of finger rings as he might afford if it was a case of steel bridges. The salesman is as potent in one case as in the other, but the same outlay does not bear the same proportion to the probable volume of business. The finger-ring manufacturer must expect his

product to be introduced as a side venture or as included in the larger group of jewelry. Generally speaking—that is, in so far as such comparisons can be made—the cost of keeping a traveling salesman on the road in Latin America is greater than in the United States.

Ordinarily there is no good substitute for the traveling salesman. Advertising by means of circular letters, catalogues, or whatever other means may seem advisable seldom takes the place of the personal appeal of the salesman with his sample case. This is true here and it is true in the same degree there. If there be exceptions to this general rule that the salesman is the best selling agent, and no doubt there are such, for experience has proven it, then one may confidently assume that whatever agency has proven better than or as good as the traveling salesman in the United States will prove as good or better in Latin America. For example, the mail-order house does not employ traveling salesmen; it could not very well, if for no other reason than that the line of goods it sells is too large. There are other reasons, but this is of itself sufficient. It would be the height of folly for a mail-order house in the United States in entering the Latin American field to change radically its methods in this or any other material aspect. The reasons which cause the illustrated catalogue, when placed in the hands of the ultimate buyer, to be a powerful selling agent have the same application in Latin America as in the United States. The catalogue is in effect the same, but there must be surface differences. In other words, one must place the catalogue before the buyer in Latin America—and this applies to all catalogues, mail order or any other—in just the same way as he places it before the buyer in the United States. In the United States he prints his catalogue in English because this is the language of the country; for circulation in Argentina or Mexico he must print it in Spanish, and in Brazil in Portuguese. In the United States he gives weights and measures by the English system—pounds, yards, inches, etc.; in Latin America he must use the metric system—kilograms, grams, meters, centimeters, and liters. Why? For several reasons; but at this point it is necessary to state only one, in order that his customer may more readily understand. In his United States catalogue he would not think of listing a 2-liter teapot, and for the same reason he should not list the teapot at 2 quarts in Latin America. Farther on an attempt will be made to state the relation of the measure system to the article itself in respect to exporting; at this point reference is only to cataloguing measures, the assumption being that the measure itself is not vital (which is true in many cases, but not in all), and the only need being to translate the little understood English measure into the better understood metric measure—a mere conversion of terms with no essential difference. Of the essential differences we will treat later.

In a catalogue, price list, or other price statement it is very necessary that there be no misunderstanding on the part of the customer as to what this price is; in other words, in what funds it is payable. More errors are made and more misunderstandings are occasioned in this matter than in any other. In the United States one gives prices in dollars and cents without any qualification. Every one understands what \$1.75 means, but every one in Latin America does not understand what \$1.75 means. That is not to say that Latin Americans do not know the United States money system, for, as a rule, they do, all business men at least do; but that they are not able from the catalogue to determine whether it is the United States or the local currency which is meant. The dollar mark (\$) so called in the United States is the peso mark of about half the Latin American countries. In Argentina, for example, it is as freely used as it is here, but it means standing alone the Argentine paper peso, of which \$100 at the par rate are equal to about \$42.45 United States. The Argentine buyer understands by \$1.75 a value less than 75 cents United States (\$0.7429). On the other hand the dollar mark (\$) is used in Chile to denote the Chilean peso, which is worth less than the Argentine peso; and other countries use the dollar mark (\$) with the same local significance. This mark standing alone may mean anything from a few cents (in Guatemala or Paraguay) up to \$1.03½ (in Uruguay).

Some have sought to overcome this difficulty by having separate price lists for each country. In the case of catalogues this is not practical because of the extra expense of printing and the liability of error in mailing; but, worst of all, it creates a new set of misunderstandings, which are even more likely to occur than in the use of the unexplained dollar mark. In some of the countries the peso fluctuates in value; this is where the currency is irredeemable paper, as in Chile, or where it is based on silver, as in Salvador. In such cases unless new lists were issued (even the daily fluctuations are occasionally great) to meet the rise and fall of the gold premium the whole basis of the price lists would be destroyed. Then, again, commercial or bank exchange also varies, so that a draft in Argentine or Chilean currency (even supposing the gold premium to be constant) would at one time net \$100 in New York and a draft for the like amount at another time net only \$85 in New York. Stating prices in the local currency is from no standpoint to be advised, nor is it necessary. The statement in all cases should be in United States funds, but this fact must be clearly indicated. The best way is to add to each price statement the words "United States gold" (oro de los EE. UU., or oro americano), thus \$1.75 oro americano. Another way is to print at the top of every price statement and on the outside cover and at the head of each catalogue page the words, "Todos los precios son de oro americano." Any method which clearly indicates that the price is stated in United States currency and that the draft or other remittance is expected to be in dollar funds is sufficient.

BRAZILIAN GOVERNMENT STUDENTS IN THE UNITED STATES " " " " "

BY decree of May 20, 1918, the Brazilian Minister of Agriculture, Industry, and Commerce was authorized to offer to the best students in the schools of agricultural, veterinary, and industrial training in the country, prizes of trips abroad for post-graduate study, in order to raise the standard of professional instruction in these branches and develop a body of well-trained technical men. The students, who are chosen on a competitive basis from among the graduates of federal, state, or municipal schools meeting the requirements of the decree, are required to send in regular reports on their progress and plans. The Government furnishes traveling expenses to and from the foreign country and a monthly allowance for living expenses abroad during a period of two years from the date of leaving Brazil. The maximum number of students to be sent during the first year is 50.

In November, 1918, a group of 27 students arrived in New York to study in United States institutions, and a second group of 7 came a few weeks later. They were met by Dr. Jose Custodio Alves de Lima, inspector general of Brazilian consulates in the United States, who has been designated by Dr. J. G. Pereira Lima, the Brazilian minister of agriculture, to look after the welfare of the students during their two years' stay in this country. He was assisted in welcoming the students and locating them at various agricultural and technical colleges by officials of the committee on friendly relations among foreign students, the American Council on Education, and others, especially Mr. Arthur W. Manuel, director of the Latin-American division of the former committee, who has recently returned from Brazil. The section of education of the Pan American Union was able to secure the concession of free tuition for some of the young men more conversant with the English language.

The students, who are in the main graduates of Brazilian agricultural schools, a few having had electrical or other technical courses, have been sent to various institutions all over the United States where they could most advantageously pursue the special branches in which they are interested, such as veterinary surgery, plant pathology, cotton cultivation, fruit culture, agricultural chemistry, the leather industry, electric railway construction, and hydro-electric plants. They are young men of a very high type, and con-



STUDENTS SENT BY BRAZILIAN GOVERNMENT FOR GRADUATE STUDY IN THE UNITED STATES.

The Brazilian Department of Agriculture has sent several students to the United States for graduate study. Most of them came to this country in November, 1918, but a smaller party arrived in the early part of 1919. Upper picture—Upper row from left to right: Octavio Cabral de Vasconcellos, Octavio Gomes de Moraes Vasconcellos, Joaquim de Rocha Madeiros, Paulo Ferreira de Souza, Archimedes Pereira Guimarães, Benedito Paiva, Benedito de Oliveira. Middle row: Jose Vizioli, Jose Rodrigues Seabra, Theophilo Barreto Vianna, Dulphe Pinheiro Machado, Mario Ferraz de Magalhães, Antonio Peixoto Alves de Souza, Octavio do Espírito Santo. Lower row: Moacyr Alves de Souza, Alberto Alves Peres, Carlo Bastos Tigre, Arthur W. Mammel, Dr. Jose Custodio Alves de Lima, Dr. Charles Evers, Arthur Oberlander Tiban, Jose Ernesto Monteiro, Octavio Gonçalves Peres. Lower picture—Seated: Jose Custodio Alves de Lima, in charge of the students in the United States. Standing (left to right): Jose de Paulo Brito Felisberto de Comargo, Francisco Fragoso Filho, Joaquim Bertino de Moraes Carvalho, Hermes Cunha de Barros Lima, Arthur W. Manuel, Director of Latin American Division, Committee on Friendly Relations among the Foreign Students, New York City.

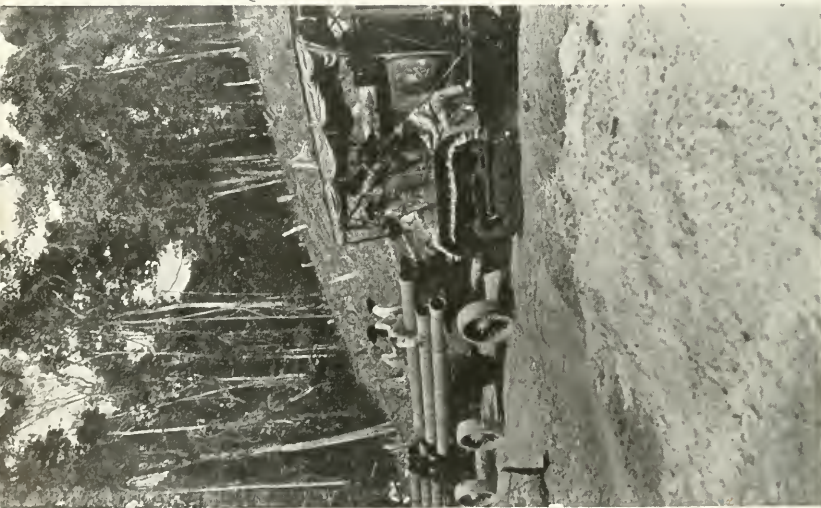
stitute a notable addition to the already large contingent of Brazilian students in the United States. They have been cordially received by the various colleges which they have entered, in some cases special faculty advisers being provided. It is to be hoped that these young Brazilians will have a most profitable period of study in the United States, and that they will be followed year by year by other groups of students, who will carry back to their own country not only valuable technical knowledge, but many friendships which will knit closer the strong ties already binding together the two republics.

COAL AND OIL IN CO- LOMBIA¹

NEARLY all who have traveled in South America or who have studied conditions there and the possibilities offered by the countries of that continent for the development of agriculture, mining, industry, and commerce seem to agree that Colombia is one of the South American nations having a great potentiality of production and a vast field for colonization, owing to its area of 476,900 square miles—an extent of territory only surpassed by three of its sister Republics—and to its remarkable natural resources. In fact, only those who have traveled in that country and observed the number and variety of natural products scattered along the valleys of its marvelous rivers, in its dense forest regions, and in its numerous mountains, can fairly estimate the value of its soil and the vast range of fertile lands so well adapted to the production of large crops of sugar cane, wheat, rice, maize, cotton, and practically every product of the tropical, the subtropical, and the temperate zones.

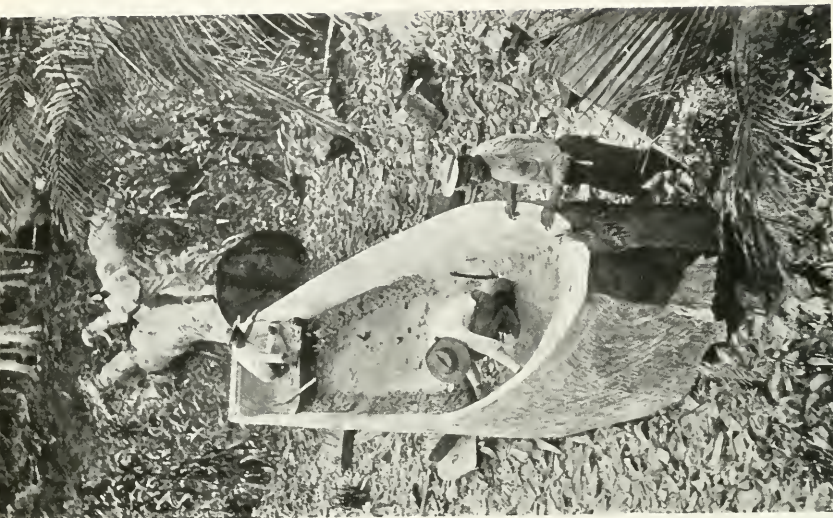
Some geographers say with reason that the fertility of Colombia's soil is astonishing, and many people are inclined to believe that the progress and development of that country depend largely on its agricultural production; but if credit be given to those who have explored the country from one end to the other, mining will be perhaps the real leading industry in the near future, and the industry from which the country will derive its principal revenue, due to the fact that its mineral wealth is something surpassing all calculations. In coal, for instance, very few countries rival Colombia, and very few will be able to equal it in production when the coal industry is

¹ By J. M. Coronado, of Pan American Union staff.



USING MODERN TRACTORS IN COLOMBIA.

Hauling the tubing by which the oil is to be brought from the wells to the bank of the Magdalena River.



CONSTRUCTION OF CANOES.

Making canoes to transport the traffic between Infantas and the ports of the Magdalena River. The picture gives an idea, also, of the kind of trees found in the Colombian forests.



VOLUME OF OIL FROM WELL NO. 2 OF THE MINA DE INFANTAS.

From this picture the force of the oil, in the first well sunk in the oil region of the Colorado River by the Tropical Oil Co., may be judged. After capping a well it is sometimes necessary to let out some of the oil, even if it must be wasted, in order to prevent the force of the stream from destroying the well entirely.



CARRYING SUPPLIES TO THE OIL WELLS.

Caterpillar tractors are used by the oil companies to carry supplies over the rough roads to the oil wells. This tractor is used in hauling heavy machinery from the Magdalena River to the oil fields in the vicinity of the Colorado River.

developed on a large scale. The extension of its coal fields is estimated at 8,288 square miles, containing 27,000,000,000 metric tons of coal. According to "Anales of Ingenieria" of Bogota, the Colombian coal fields are practically unexplored, coal being mined at a few localities only on a very moderate scale.

The coal-bearing formation is probably of post-Cretaceous age, and, judging by the outcrops, it must underlie very extensive areas. The formation consists of sandstone and clay shales, with which the coal seams are interbedded. Three coal seams are known to occur, varying in thickness from 0.6 meter to 1.2 meters each, with one having an approximate average thickness of 2 meters. They are fairly regular in character. The coal is bituminous, the quality being very uniform throughout the country.

The Departments of Cauca and Valle have, probably, the largest coal-bearing areas, although no coal has yet been mined there. Next in importance are the Departments of Cundinamarca and Boyaca, where small quantities of coal are being produced for railway, metallurgical, and domestic consumption. The coal fields in the Department of Antioquia are of less importance and very little mining is being undertaken. In the Department of Nariño, in the region of the Putumayo River, there are, in all probability, extensive areas underlain by the coal-bearing formation. In addition to the well-known areas already mentioned, there are small patches of coal formation found in many other departments, as well as outcrops of coal differing from the typical post-Cretaceous Colombian formation and referable to the Paleozoic; they are, however, of less importance.

From what has been said it can be seen that the possibilities of Colombia as a coal-producing country are very great. Valuable as these may be, however, the reports published lately in regard to the considerable quantities of oil discovered in Colombia would indicate that on this industry, more than on any other, may depend the development of the country. The oil wells, which are being drilled there, despite the fact that the work is only in its initial stages, are already ranked next to those of the big oil-producing countries, such as Mexico, the United States, and Roumania.

Geologists have divided the oil zones of Colombia into two regions—one formed by the solid wall of the western range of the Andes, which serves as a counterfort to the Cauca valley on the western side, and which extends along the water courses running to the Pacific Ocean, and the other formed by the extensive valley of the Magdalena River and its tributaries, which ramifies and opens more and more in an eastern and western direction in approaching the coasts of the Caribbean Sea. The area of both zones has been estimated at more than 34,000 square miles, but of these only 650 or more are considered of real commercial value. This, however, is merely an esti-



CAPPING AN OIL WELL IN THE MINA DE INFANTAS.

This is a very difficult operation, for at times the oil flows with a tremendous force and it frequently happens that much of the valuable oil is wasted before the stream can be stemmed.



STEAMSHIP "ROBERT FULTON" LEAVING THE PORT OF INFANTAS.

The *Robert Fulton* has the distinction of being the only steam vessel to plow the Colorado River. It was purchased by the Tropical Oil Co. to carry provisions and machinery, but its operation was not successful because of the many narrow and shallow places in the river. In the background may be seen a few buildings erected at Infantas by the same company.

mate, and only a geological survey could verify it. Along the western plains and in the southern region of the country there are also many indications of oil, but as yet nothing has been done to determine if they are of any great value as oil fields, probably because of the lack of good roads.

About the first zone very little information has been published up to the present, due to the fact that it has not been carefully explored and that only unimportant investigations were made some time ago in the neighborhood of the Baudo River, which rises in the mountainous district of the same name and flows through the district of San Juan, parallel to the Pacific coast, in an opposite direction to the Atrato River. That river, which has a total length of 230 kilometers, of which 100 only are navigable by small boats, is entered from San Juan through the Suruco River.

The oil zone of the Magdalena Valley, of which the oil regions of Catatumbo in the Department of Santander seem to be an abundant and rich branch or continuance, has been very well known for many years, more than 50 geologists having explored this section in different directions. However, active steps for its development were not taken until a few years ago, notwithstanding the fact that at the beginning of the nineteenth century the noted geologist Baron Alexander von Humboldt discovered in the vicinity of Cartagena some flow or escape of natural gas, some asphaltum deposits, and other indications of the existence of oil sources. Regarding the quality of oil that is produced it can be said that the analysis of samples found in Colombia reveal that the various deposits contain mineral oils, some with an asphaltum and others with a paraffin base.

In regard to this zone a prominent American geologist who visited it two years ago said:

It can be affirmed that all the Magdalena Valley, from far inland to the seacoast, is a very large subterranean "bag" of oil, whose existence is being confirmed more and more every day by the superficial exudations produced by the great pressure exerted on it by the two surrounding ranges of mountains. Any part of the land may be drilled and oil will flow. The only thing is that in large sections the upper part of that "bag" is located at a depth which can not be reached by the methods known; but in others, oil is very near the surface of the earth; so the latter are the zones which may be qualified accurately as oil lands.

According to the same geologist, one of the regions where oil may be found near the surface is located in the vicinity of certain tributaries of the Opon River. This has been definitely confirmed by an American company working near the Oponcito and La Colorada Rivers, tributaries of the former, with such success that at the beginning of last year oil was found in great quantities at a depth of only 1,500 feet in well No. 2 of the Infantas Mine on the Colorada River; and about the end of the year oil gushed from well No. 1 of the same mine. The column of oil in well No. 2 gushed with such a



CRAFT USED FOR TRANSPORTING MACHINERY FROM THE MAGDALENA RIVER
TO THE PORT OF INFANTAS ON THE COLORADA RIVER.

These barges, which are usually equipped with gasoline engines, cover the 48 miles between the port of Barranca Bermeja, on the Magdalena, and Infantas, on the Colorado River, in six or seven hours.



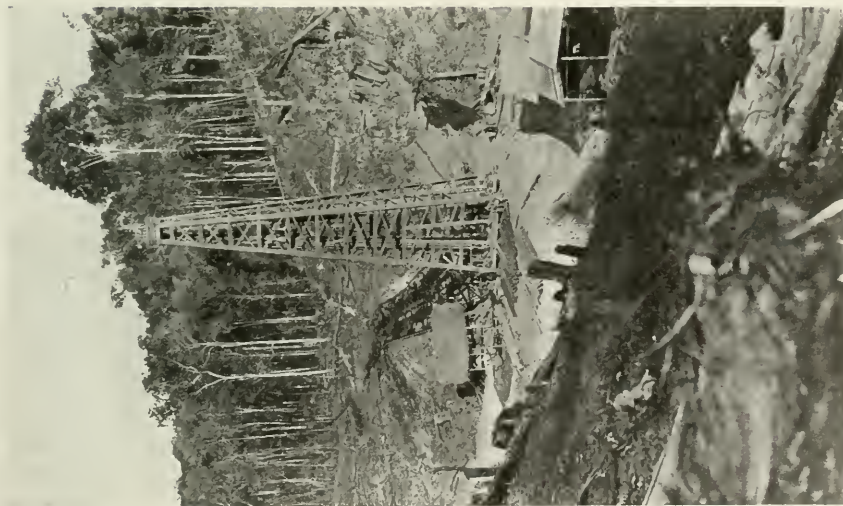
VIEW OF THE PORT OF BARRANCA BERMEJA ON THE MAGDALENA RIVER.

Barranca Bermeja, situated 426 miles from Barranquilla, is the dock for traffic going to the oil region near Infantas. Infantas is 41 miles inland from this port, or 48 miles if the trip is made by water.

force into the air that it could not be controlled for a week, spreading oil over a vast area of land and over the surface of the neighboring rivers to such an extent that the Colorado River seemed to be the outlet of a large oil lake. Both wells have been duly capped pending the arrival of the necessary material for the construction of a pipe line which is to convey the oil wells to the Magdalena River, thence to be transported to the seaport of Cartagena, where it will be loaded into special vessels to carry it to the markets of the world. In the meantime, drilling is being continued in several places.

The oil region of Infantas is located 41 miles by land from the port of Barranca Bermeja on the Magdalena River, or 48 miles if the trip is made by water. The latter requires the ascent of 2 leagues of the Magdalena River to the mouth of the Opon, then proceeding for a quarter of a league on this river to the mouth of the Colorado, and the ascent of the latter to the port of Infantas—a trip which can be made in five or six hours in a motor boat. This journey will be considerably shortened in the future by a railroad that the company is building from the Magdalena port to the center of the oil fields. In Infantas there is a very good road from the river port to the buildings of the company, situated on a hill, and from there to a large opening in the nearby woods, which is covered with a thick layer of asphalt containing considerable quantities of a dark and bituminous matter. There a tower rises 120 feet, and underneath, moved by powerful machinery, are the drills boring down into the earth for the placement of vertical piping. The road extends through the wood to where two more towers are doing similar work. It was from well No. 2 that oil first gushed.

The concession for the exploitation of the oil lands of that part of the Department of Santander embraces an area extending from the mouth of the Sogamosa River up the Magdalena to the mouth of the Carere River; up this river to the foot of the eastern range; then, following the foot of this range to the Sogamoso River, and this river down to its confluence with the Magdalena. This concession was secured from the National Government some years ago by Señor Roberto de Mares, a prominent Colombian, who may be called the pioneer of the oil industry in Colombia. As it was not possible to secure enough money in Colombia for an enterprise of this kind, Mr. de Mares succeeded in interesting a group of American capitalists of Pittsburgh, Pa., who after hearing the report of the commission of geologists, which they immediately sent to investigate and study the ground, made a contract with the grantee for the exploitation of these oil lands and organized a company, with a capital of \$50,000,000, for the development of the business. Under the direction of that company, known as the Tropical Oil Co. (Ltd.), the work of finding oil in Colombia has been made a success.



OIL WELL NO. 2 OF THE MINA DE INFANTAS.

Early in 1918 the oil flowed from this well with such force that it was impossible to cap the stream for several days. According to eyewitnesses the oil spurted to a height of 60 feet and the surrounding country was a lake of oil.

While no information has been published concerning the output of Colombia's oil regions, probably official statistics will soon show how much oil is gushing from wells Nos. 1 and 2 of the Infantas mine, and how many more have been drilled there.

Considerable work has been done also in some of the oil fields in the vicinity of Cartagena and in the valley of the Sinu River, but up to the present very little information has been published about them. Five or six years ago a local company began drilling near the town of Turbaco, about 15 miles from Cartagena, and in May, 1913, a depth of 2,400 feet had been reached. While considerable quantities of gas were encountered at various stages, and there was said to be a strong showing of oil with marsh gas, no gusher has yet been developed. On the Sinu River the results have been more encouraging, considerable quantities of oil having been obtained at very little depth. This made possible the establishment of a refinery in Cartagena for the utilization of that oil and other products. According to local information, the Standard Oil Co. is also developing a large oil field in that vicinity.

GODOY'S TRANS-ANDEAN FLIGHT

A YOUNG officer of the Chilean Army, Lieut. Dagoberto Godoy, on December 12, 1918, accomplished one of the most remarkable feats known in the history of aviation. In his flight from Santiago to Mendoza Lieut. Godoy crossed the Andean Range at a height of 17,300 feet (5,675 meters), thus breaking the world's record for height in crossing mountain ranges. The trip was made in a Bristol monoplane with a 110-horsepower Le Rhone motor. He flew the 210 kilometers between Santiago and Mendoza in a straight line in 1 hour and 28 minutes, at an average velocity of 130 kilometers an hour.

The crossing of the highest peaks of the Andean chain had been the greatest ambition of Chilean and Argentinian aviators, as it would rank as by far the most monumental achievement in the annals of high mountain flights.

The talented and venturesome Argentinian engineer, Jorge Newberry, was the first to be killed at the foot of the Andes in an attempt to accomplish the object. A short time later another Argentinian engineer, Señor Mascías, also attempted the flight, but met with similar disaster. Later, Lieut. Zani got within a few kilometers of



LIEUT. DAGOBERTO GODOY.

Dagoberto Godoy was born in Temuco, Chile, on July 27, 1893, and is a lieutenant in the Chilean army. On December 12 he succeeded in flying over the Andes at an elevation of 17,500 feet. He covered the distance of 210 kilometers between Santiago, Chile, and Mendoza, Argentina, in 1 hour and 28 minutes.



EDUARDO BRADLEY.

Eduardo Bradley crossed the Andes in a balloon on the 24th of June, 1916, by practically the same route taken by Lieut. Godoy in his recent aeroplane flight.



LIEUT. LUIS C. CANDELARIA.

Lieut. Candelaria, of Argentina, made a balloon flight over the southern part of the Andes between Zapala and Cunco in April, 1916.



CLODOMIRO FIGUEROA.

The Chilean aviator Figueroa made an ineffectual attempt to cross the Andes Range by the same route as his more fortunate countryman, Lieut. Godoy.

the divide, when he in turn had to renounce his purpose. The popular Chilean aviator, Figueroa, failed in like fashion. To the two intrepid Argentinian aeronauts, Bradley and Zuloaga, belongs the honor of having made the first successful flight over the Andes in a balloon, on July 24, 1918. In April of the same year a lieutenant of engineers, Luis C. Candelaria, desirous of rending the veil of mystery which enshrouded the range, had traversed the southern ridge, vying with the condor for sovereignty as he crossed from Zapala to Cunco, at a height of 2,000 meters, thus driving the opening wedge for those who were later to undertake pathfinding over the most difficult part of the Andean region lying between Chile and Argentina.



JORGE NEWBERRY.

This noted Argentinian aviator met his death while trying to cross the Andes by way of the Uspallata Pass.

The name of the victorious Lieut. Godoy has been indelibly traced in the annals of aeronautics, in which he won fresh laurels for his country's gallant army. No description of his flight and of the innumerable difficulties he overcame can exceed in color and interest that which the aviator himself has given in the following paragraphs:

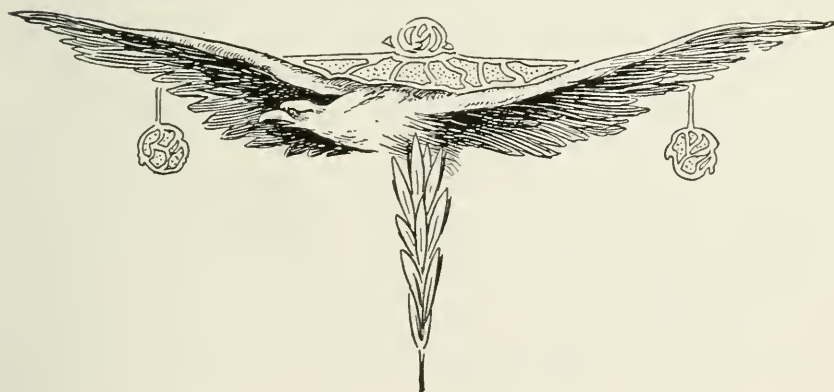
At last I was to get a bird's-eye view of the peaks upon which I had so often gazed from the track of my airdome. The Bristol mounted into space for a time. I had not yet looked downward. I had to watch my altimeter, my compass, the regular throbs of the oil engine, and the revolutions of the motor. I had to change the carburization continually and regulate the Le Rhone; and then, when my altimeter had passed the 17,000 feet, I looked downward.

I was in an unknown world. The mountain range stood out wonderfully clear; everywhere were canyons, immense black-mouthed valleys, gentle foothills, and icy slopes. At the left Tupungato rose near me to my own height, or perhaps higher,

like an enormous skyscraper, a magnificent yet graceful tower rearing itself toward heaven. On one side it had a long, gradual, almost horizontal slope, like a palm of the hand, white and frozen, but hospitable, inviting me to alight and linger. But the impression was fleeting. The Bristol told me I was going 180 or 190 kilometers an hour, hence the scenery altered rapidly. A moment later I crossed the frontier. My country was behind me; before me lay the sister nation and triumph—my slight but longed-for victory.

At that moment the motor missed and nearly stopped. I guessed what was the matter. The automatic engine was not working and the gasoline couldn't reach the carburetor. I worked an instant and the engine and rotary started up again before the change had affected the apparatus. I had to land. So I lessened the supply of gas slightly and began to descend slowly. The needle, which had reached a maximum of 17,300 feet, gradually lowered. Then the battle began, which lasted perhaps three or four minutes. The plane seemed to be crazy. That morning there had been a windstorm on the Argentinian side. Perhaps that was the result of the cyclone. Then—calm again. And there in the distance amongst the far-away foothills, insignificant when contrasted with the huge bulks I had just left, rose the outline of Mendoza, beyond the great plain, covered by a heavy veil of clouds.

Ten minutes later I was over the historic city. I could not see Tamarindos, the aviation camp, anywhere. I searched anxiously until I despaired of finding it. As there was a good field 2 leagues farther I started for it, unfortunately. I broke the screw propeller and the landing gear. I came to ground a little worn, my hands knotted from the cold, still rather uncomfortable from the rarity of the atmosphere in the heights, as I had not carried oxygen with me. I sprang to the ground and experienced a new, awesome emotion: I had realized the fulfillment of my dream—I had crossed the Andes.



PAN AMERICAN NOTES

THE NEWLY APPOINTED AMBASSADOR OF ARGENTINA TO THE UNITED STATES.

DR. TOMÁS A. LEBRETON, the new ambassador of Argentina to Washington, is one of the most widely known members of the party in power in his country. He was one of the coterie of men that instituted a vigorous and successful campaign for the betterment of the electoral laws of the country. At the time he was fighting for this cause he was also devoting himself to professional duties, especially to the subject of trade-marks. He represented several Argentine organizations at various continental congresses in which the matter of trade-marks was under consideration. He continued in the office of Deputy to the National Congress (to which office he was elected in 1914) until his present appointment. His career as a legislator was brilliant. The passage of many laws highly beneficial to the Republic can readily be traced to his initiative. As a member of the Budget Committee he displayed a thorough acquaintance with the commerce, trade, political, economic, and financial relations of his country. At the beginning of the European conflict, in a debate in the Argentinian National Congress, he advocated the rupture of diplomatic relations with Germany. Having renounced his office as deputy in order to visit Europe, the people of the Federal capital again elected him to Congress. He has alternated legislative duties with private enterprises, thus complying with personal obligations as well as the duties of citizenship. Dr. LeBreton was one of the most enthusiastic promoters of the popular universities of Buenos Aires, Rosario, and Santa Fe. His zeal for the education and the well-being of the laboring class extended in every direction. One practical manifestation of his philanthropy consisted in the erection of a municipal bath-house, which bears the title "LeBreton Bath" (Balneario LeBreton). His tireless energy and inclination toward the practical, together with his sympathetic comprehension of American institutions, will, without doubt, result in still further strengthening the cordial relations between his country and the United States. Dr. LeBreton was officially received by President Wilson on March 3, and a few days thereafter left for Paris for a short stay before resuming his duties in Washington.

LUNCHEON IN HONOR OF THE MINISTER OF PARAGUAY.

The Pan American Society of the United States on January 30, 1919, gave one of its characteristic luncheons at the Bankers' Club in



HIS EXCELLENCY SEÑOR TOMÁS A. LEBRETON, THE ARGENTINE AMBASSADOR.

New York, the guest of honor on the occasion being Señor Don Manuel Gondra, envoy extraordinary and minister plenipotentiary of Paraguay. In introducing his excellency, Mr. John Bassett Moore, president of the society, spoke as follows:

Speaking only of inanimate things, I feel at liberty personally to testify that one of the most delightful objects daily to be seen at the International Exhibition at Buenos Aires in 1910 was the effigy of a bride draped in lace. It was, indeed, no ordinary vision. So strong was the verisimilitude and so striking were the effects that the beholder seemed in fancy to await the slow procession moving in measured cadence to the music of the hymeneal march. Nor do I intend to deprecate the merits of an important modern industry when I say that the bridal trappings in the present instance were no machine-made product. On the contrary, they were the work of the human hand inspired by that innate sense of beauty which, while incurring infinite labor and pains for its own satisfaction, enriches the world with the creations of art. When, however, in the ordinary course of human emotions the visitor presently inquired as to the origin and significance of what he saw, he learned that it was an ingenious exhibit of Paraguayan lace, of which Buenos Aires and Montevideo were then perhaps the chief markets.

The poet has assured us that "a thing of beauty is a joy forever." We accept the assurance, but, as experience unfortunately teaches, we are obliged to accept it with the qualification that joys often linger only in memory. Hence it is that we learn to prize the union of strength with beauty as the ideal combination. And if objects of beauty are produced by Paraguayan hands, so strength may be derived from the products of the Paraguayan soil.

When I say this I do not speak at random. I approach the subject with a grave and definite purpose, and under the benevolent impression that I may at once confer a boon upon my fellow countrymen and a favor upon a friendly people. I will therefore proceed to render my meaning intelligible and precise.

The possessor of a well-known name, which, because of its genial associations, is soon to be banished from an important part of the Western Hemisphere, was wont to remark that he had gained his fortune, not by leaps and bounds, but by hops. In the United States this process, which proved to be so successful in the case of Sir Michael Bass, has now been placed under the ban; and having lengthened the Decalogue by constitutional amendment, we find ourselves in quest of a universal beverage, tonic in its effects without undue stimulation, that shall preserve beauty, minister to strength, and tint the future with the roseate hues of the dawn. These properties, I venture to affirm, may be found in what is technically called "yerba maté," otherwise known as Paraguayan tea. Often, as the feathered denizens of the forests chanted their vespersong, have I seen the hardy boatmen of the affluents of the Plate produce their simple cups, and brewing from that native product a delectable draft return to their sober tasks reinvigorated and refreshed. Wherever tried, its restorative and sustaining qualities have been fully demonstrated. Indeed, we are told that the surveyors of the Argentine-Chilean boundary largely relied upon it for sustenance in the remote and barren altitudes in which they were so frequently obliged to carry on their work.

Paraguay, although she has a past, may be said to be a country of the future. Lying more or less removed from the great lanes of commerce and industry, her resources have to a great extent remained undeveloped; but with the extension of railways and steamer lines, she is beginning to come into her own. With a climate partly tropical and partly temperate, her productive capacities are capable of great development. Her soil may be made to contribute most abundantly to the supply of the world's wants, while her forests, rich in woods of various kinds, will furnish materials essential to the comforts and conveniences of life.

Nor is our interest or our pleasure on the present occasion diminished by the fact that Paraguay, politically speaking, is one of the so-called "small nations." This title is by no means derogatory, since it apparently embraces all the nations of the world except the great powers which are coming to be irreverently known in the press as the "big five." Within that supreme and restricted circle we find unquestionable strength, but not as yet a monopoly of territory or of population, nor by any means a monopoly of virtue. Nor should we forget that, for what may from time to time be lacking in permissive representation, it is always possible to make up something in individual character.

In this high sense Paraguay is most fitly represented to-day by the eminent citizen whom we have the honor to entertain. Statesman and diplomatist, he represented his Government as minister to Brazil from 1905 to 1908, and was one of its delegates in the Third International American Conference at Rio de Janeiro in 1906. In 1910 he held for a time the exalted post of President of his country. He had previously served for two years as minister of the interior. From 1910 till 1918 he held, under two successive presidents, the portfolio of minister of foreign relations; and while holding this position he availed himself of the opportunity to extend to the United States, in a great crisis, an expression of the cordial sympathy of his Government. His reputation as a scholar, as a historian, and as a man of varied accomplishments, has likewise spread throughout the Americas, calling forth many striking and well-deserved tributes. We therefore welcome him in his personal as well as in his representative character, feeling that in assuring him of our admiration and respect we are paying honor where honor is due.

I ask you to rise to the health of his excellency, Dr. Manuel Gondra, envoy extraordinary and minister plenipotentiary of our sister Republic of Paraguay.

In response to the happy introduction of President Moore, Minister Gondra spoke in part as follows:

Some moralist has said that he who rejects a eulogy only desires to receive it twice. At the risk of incurring such a suspicion, I must be grateful for, without accepting, however, the kind expressions which your president has addressed to me. At the same time I treasure those he has offered to my country, since I am not unaware that this demonstration is made properly to me in my official and representative character, rather than to me personally for any merits I may possess.

Not with any desire merely to reciprocate the good will of your president, since a person of his character and scientific attainments is above praise, but because it is my sincere opinion, I must say, gentlemen, that Prof. John Bassett Moore, as the president of the Pan American Society of the United States, is, according to an American saying with which I am familiar, "the right man in the right place." When a society like this, in which there are members so conspicuous in the politics, the letters, and the banking of this great Nation, designates as its leader an illustrious master of international law, that society has personified, perhaps instinctively, the ideal that vitalizes it; it has desired to indicate that the spiritual nexus that ought to bind together all the societies of America is not to be found principally in the occasional community of political tendencies, nor in the simultaneous cultivation of the same esthetic ideals, nor in the ties of economic interests, which for the very reason that they strongly unite, are exposed to severance, but in the higher bond of justice, stronger than that of interest, more beautiful than that of art, and more lasting than that of mere political contingencies.

Because, gentlemen of America, I must say to you, who hear me at this moment, that the essential forces of the great Nation that you form are rooted in the justice, that might be called innate, of her historical actions, a justice from which she will never recede without diminishing, you may be sure, her potency. These ideals of justice

won in your war of independence; they triumphed in your Civil War, a war that was civil in two senses, because it was between brothers, and because from it sprang, with the plentitude of civil rights, millions of men; and, finally, these ideals of justice glowed in the bosoms of your soldiers at the battles of Chateau Thierry, Belleau Wood, and Saint Mihiel, where they, fighting against superior forces, made good the words of Shakespeare, "Thrice is he armed who hath his quarrel just."

In speaking to you thus, believe me, I express to you sentiments that are grounded in the consciousness of my people. In Paraguay the name of the United States spontaneously awakens the idea of justice. Let me explain why, by reference to brief reminiscences of our history.

In 1857 the relations between my nation, small but proud, and yours, great and strong, suffered a painful interruption. Incidents of a character merely diplomatic, at first, and complaints of American citizens with interests in Paraguay, later, so much impressed the American Government that it formulated against my Government a demand that was with the authorization of the Congress to be supported materially by force, if it should be deemed necessary, under the circumstances. The American Government made use of such authorization, and it honored Paraguay by ordering there the largest American squadron ever sent to South America as a war measure. We had "the honor," I have said, because the anger of the great is produced only by the worthy. Nineteen vessels, equipped for war, with 200 cannon and nearly 3,000 men, went to uphold the diplomatic action of the American envoy. The opportune mediation of a friendly Government facilitated the solution of the conflict, and an agreement was signed between the United States and Paraguay to submit the pending questions to the investigation of two commissioners, one of whom should be an American and the other a Paraguayan, who were empowered to designate a third in case of a tie. The commissioners met at Washington; they took into consideration the allegations and proofs presented by both parties; and on March 12, 1860, the American judge formulated his award—accepted by the Paraguayan—in which he declared that:

"Upon the proofs aforesaid the Government of the Republic of Paraguay is not responsible in any damages or pecuniary compensation whatever in all the premises."

That judge was ex-Postmaster General C. Johnson, regarding whom President Buchanan could not refrain from saying: "The American commissioner is as pure and honest a man as I have ever known."

This issue of the difficulty strengthened the relations of friendship between the United States and Paraguay, and it taught us that there is something stronger than an American fleet—the American justice.

A decade later, in 1870, came the termination of the long five-year war which we had maintained against the triple alliance—a war whose history is our pride and whose memory is our glory, issuing from it almost annihilated, and having been called upon to yield territory that we, even vanquished, ought not to have yielded. We remembered that in your country we had once found a judge; so, in agreement with the opposing party in litigation, we carried the case to an American President. That President, who was Rutherford B. Hayes, gave a decision in which he recognized our clear right to the territory of the Chaco—that in dispute. In token of gratitude the congress of my nation passed a law which gave the name of President Hayes to a town in the territory mentioned. Thus the name of a great American citizen was the first name of a foreigner incorporated by reason of justice into the nomenclature of our political geography.

Now you comprehend, gentlemen, why I said to you that in my country the name of your Nation suggests the idea of justice, because in your country we have found judges who decided even against the interests of their fellow countrymen.

You will now understand also why it is that Paraguay hastened to accept the Pan American doctrine, enunciated in 1890 by Mr. Blaine, with the support of your

Government, complementing the historic declaration of Monroe; why she adjusted to it her international attitude in the great war that has just reached a happy conclusion; why, finally, she accepted with spontaneous adherence the bases that President Wilson offered for the consideration of the other States of America looking toward the creation of a great continental treaty, which was to signify the consummation of the Pan American ideal.

What now will be the future of this ideal, since it appears that all the civilized nations desire to unite in a closer community? Will continental solidarity be dissolved in a more ample and comprehensive human solidarity? Who can say? I think, nevertheless, that, although the physical laws that regulate all the waters are the same, and although all the seas are united among themselves, each of them will continue eternally to receive the rivers of its own slopes, subjected to the rhythm of its own tides, moved by its own currents, and agitated by its own tempests. So it is in history. The moral laws that govern man are equal. The different human civilizations will be spiritually united among themselves in the future; but each of the great continental societies will continue to be moved by its own historical forces, experiencing its particular ethnic reactions, agitated by its peculiar interests, and impelled by its own ideals.

If those ideals are summed up in the greatest happiness for individuals and the greatest justice for nations, which is the formula that perhaps summarizes the desiderata that your Government has proclaimed, believe me, gentlemen, Pan Americanism will continue to grow and it will bear fruit throughout the long future.

Gentlemen of the Pan American Society, in concluding I desire to thank you for the courtesy that you have extended to me, and to assure you also of the sincerity of the effort with which I shall cooperate in the work of your organization.

DEVELOPMENT OF AIR MAIL ROUTES.

The report of the Postmaster General of the United States for the fiscal year ending June 30, 1918, contains a section devoted to the aerial mail service, including the lines in operation and those soon to be established. With the inauguration of the mail route between Washington and New York on May 15, 1918, the transportation of mail by aeroplane became a permanent and practical feature of the United States postal service.

One round trip daily except Sunday is being made without fail. The trip from Washington to New York is performed on an average of 2 hours and 30 minutes, and from New York to Washington in 2 hours and 50 minutes, the difference in time being due to the resistance offered by the prevailing winds, which are usually from a westerly direction. A stop for the exchange of mail on each trip is made at Philadelphia. By this service mail between New York and Washington is advanced from $2\frac{1}{2}$ to 3 hours over the train service.

Other routes soon to be established are as follows:

1. New York to San Francisco, with feeders from—
 - (a) Chicago to St. Louis and Kansas City.
 - (b) Chicago to St. Paul and Minneapolis.
 - (c) Cleveland to Pittsburgh.

2. Boston to Key West, with feeders from—

(a) Philadelphia to Pittsburgh.

(b) Washington to Cincinnati.

(c) Atlanta to New Orleans.

3. Key West, via Habana, to Panama.

4. Key West, via the West Indies, to South America.

Negotiations looking to the conclusion of special aerial mail conventions between the United States and the foreign countries involved, for the establishment of these routes to the West Indies and Central and South America, are now in progress. It is realized that these overseas routes will require the most powerful aeroplanes with wireless installation and special construction to make them safe over the seas, but the enormous commercial advantage that will result by materially reducing the time between this country and Central and South America will justify the expenditure that such a service will entail.

Brazil also has plans underway for the development of an airplane mail and express service. By decree of October 28, 1918, the President of Brazil granted to João Teixeira Soares and Antonio Rossi a concession to establish an airplane service between the principal cities of Brazil. The stations to be established will include the capitals of all the states with further extensions whenever the demand seems to warrant such action. The service between the capitals must be in operation within two years, the Government reserving the right to extend the time for two years more. The concessionaires' activities will comprise the carrying of small packages and mail; but with the further development of aviation, passenger transportation will be permitted upon the approval of the Government. The concessionaires must admit Government student aviators to their machines and hangars, and in time of war the Government reserves the right to take over the service, paying a rental based on the profits for the three-month period preceding, and being fully responsible for the restitution of all materials taken over.

PARCEL POST CONFERENCE.

A conference was held on February 11, 1919, in Washington between postal officials and exporters and importers interested in the subject of international parcel post. The conference was held under the direction of the Hon. Otto Praeger, second assistant postmaster general. It was attended by a large number of importers and exporters, in particular those interested in the trade of Latin American countries. In addition speakers from the United States Departments of State and of Commerce, from the International High Commission, and the Pan American Union were present. A number of sugges-

tions were received from the business representatives looking to the further extension and the improvement of international parcel post exchange between the United States and Latin American countries.

COURSES IN LATIN AMERICAN DIPLOMACY AND THE CONSULAR SERVICE
IN LATIN AMERICA.

Señor José F. Godoy, formerly dean of the diplomatic corps in Cuba, ex-Mexican chargé d'affaires in Washington, D. C., and at one time a member of the governing board of the Pan American Union, is presenting at Columbia University courses in Latin American diplomacy and the consular service in Latin America. The course in Latin American diplomacy comprises briefly the origin and nature of diplomacy in Latin America, fitness and appointments, ceremonies and official and social functions, treaties and international agreements, the Pan American Union and Latin American diplomacy in the present world's war. The course in the consular service in Latin America includes lectures appertaining to the various geographical divisions of Latin America, comparison and survey of the service of American consuls and of those of other countries in Latin America, protection of American citizens and extradition proceedings, letters rogatory and notarial duties.



AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINE REPUBLIC.

The CHAMBER OF COMMERCE of the United States recently commenced work in Buenos Aires, dividing its activities into three branches, namely, education, protection, and development. According to C. M. Whittemore, its president, its object is to furnish the people of the United States with reliable information concerning the Argentine Republic, and the people of the Argentine Republic with correct information about the United States, since "the more we know each other, the better we will understand each other." The board proposes to work with the object of extending and strengthening the bonds of friendship and good will which now happily bind the two nations together.

According to estimates made by the general bureau of statistics of the Argentine Republic, using "real values" as distinguished from statistical values, the FOREIGN COMMERCE of that country in 1918 was as follows: Imports during the first half of said year amounted to 209,896,111 gold pesos, or 44,024,037 more than during the same period of 1917. The exports during the term referred to aggregated 381,696,567 gold pesos, or 76,424,554 more than during the same period of 1917. The value of the exports in the six-months' period referred to may be itemized as follows: Stock products, 232,663,065; agricultural products, 132,167,495; forestal products, 5,328,254, and sundry products, 11,537,753. The estimated commerce for the year 1918, based on the figures of the first nine months of that year, is 1,112,536,553 gold pesos, made up of imports, 434,567,518 gold pesos, and exports, 677,969,035 gold pesos.

During the first nine months of 1918 immigrant and passenger TRAVEL of the Argentine Republic was as follows: Number of persons arriving from abroad, 93,482, and number of persons leaving, 98,236. The excess of outgoing to incoming travel was due to the European war, many citizens and subjects of the allied nations having returned to enlist in the armies of their respective countries.

The year 1918 was the most prosperous year in the CATTLE INDUSTRY ever experienced by the Argentine Republic, not only on account of the volume of exports but also because of the exceptionally high prices obtained. Wools, hides, and meats were sold at prices which left a good margin of profit to the producer. From January 1 to November 30, 1918, the following meat products were exported: 1,423,842 muttons, 6,069,567 quarters of frozen beef, and 21,256

quarters of chilled beef, as compared with 1,520,939 muttons, 4,974,478 quarters of frozen beef, and 629,688 quarters of chilled beef during the same period of 1917.

In January last the WHARF of the new port of Buenos Aires was opened to public service, the works of said port having cost 25,000,000 pesos gold. The water alongside the new wharf is 33 feet deep, and the anchoring walls have a length of 365 meters. The warehouses are two stories high, built of cement, and are fireproof, each one having a capacity for the storage of 10,000 tons of cereals.

BOLIVIA.

The National Congress has approved the law projected by the president by which 50 per cent of a capital of 300,000 bolivianos is guaranteed for the establishment of a RUBBER GOODS FACTORY in Santa Cruz or Cochabamba.

A NEW TAX on mining profits has been ordered, by which every individual, company, or society exploiting one or more mines of whatever nature must pay to the national treasury 8 per cent of their net profits, with the exemption of those enterprises whose net profits do not amount to 20,000 bolivianos annually.

An ADDITIONAL TARIFF of 40 cents has been levied on exports made through all the customhouses of the Republic, of every hundred kilograms of tin, silver, bismuth, and tungsten sent from the Department of Potosi and Oruro. This tax is to be used for various purposes by the respective Departments.

According to press notices, an organization of Italian, Belgian, and Argentinian capital has been formed in the Bolivian town of Nazareno situated on the slope of the Tupiza Valley 60 kilometers from La Quiaca, the object of which is the construction of a navigable and irrigating CANAL connecting Nazareno and Salta, Argentina. The canal will follow the Pilcomayo and Bermeja Rivers and will cost several millions of dollars owing to the sinuous character of the route it must traverse. Nazareno is located in one of the wealthiest agricultural and mining sections of the Republic, there being at present three large companies exploiting the lead mines of the vicinity.

BRAZIL.

The governor of the State of São Paulo has temporarily authorized an automobile PASSENGER AND FREIGHT SERVICE along the route of the branch of the Campinheiro Railway from Joaquim Egydio to Dr. Laciada, in place of the present steam railway service.

The Department of Agriculture of Brazil has been invited by the Department of Agriculture of the United States to send to the latter country a number of technical employees of the Brazilian PASTORAL INDUSTRY service. This invitation is an evidence of the good will

and desire of the Government of the United States to cooperate with the Government of Brazil in developing and perfecting the pastoral industry of that country, and especially in regard to the inspection of meats, which service is so well organized in the United States.

The Government of Italy has contracted for the transportation from Brazil to Italy during the present year of 60,000 tons of BRAZILIAN PRODUCTS, representing a value, including freight, of \$25,000,000.

According to a report of the Department of Agriculture the steamship, passenger, and immigration STATISTICS of the port of Rio de Janeiro during the 10-year period from 1908 to 1917 were as follows: Entrance of steamers from abroad, 5,752, of which 1,750 were English, 1,153 French, 1,128 German, 830 Italian, 308 Dutch, 236 Austro-Hungarian, 236 Spanish, 156 Brazilian, 6 Japanese, 6 Norwegian, 6 Argentinian, 5 North American, and 1 Portuguese. The number of immigrants arriving was 427,958, of which 384,248 were from European ports, 15 from Asiatic, 4,125 from African, 35,706 from South American, 3,833 from North American, and 31 from Australian ports. The following figures show the principal nationalities which arrived during this period: German, 20,328; Austrian, 14,905; Argentine 1,215; French, 5,363; Spanish, 53,879; Dutch, 2,850; Italian, 35,816; English, 3,399; North American, 1,230; Portuguese, 213,326; Russian, 42,087; Swiss, 1,436; Swedes, 1,268; and Turco-Arabie, 17,291. Of the total immigrants arriving, 305,684 were males and 122,274 females.

Dr. Gonzaga de Campos, director of the geologic and mineralogic service of Brazil, has submitted to the Minister of Agriculture an extensive and detailed report concerning his trip to the State of Santa Catharina. According to that report, there are four important COAL BASINS which have not yet been explored in the south of said State, namely, Alto Tubarão, Alto Mai-Luzia or Treviso, Crissiuma, and Urussanga, near the sources of the river of that name. Lage Bros., who have just completed the construction of a railway connecting with the Thereza Christina line, work the first deposit, shipping therefrom 1,200 to 1,500 tons of coal per month. The Treviso field has numerous veins of coal, and the Urussanga coal deposits are of great importance because of the numerous veins which extend through the valleys of the upper streams which enter that river on the right-hand bank. The Urussanga Coal Co. has commenced the exploitation of the coal of the valleys of the Deserto and Caiti Rivers.

The Government has contracted with the Aranja Coal Co. for the construction of a 30-kilometer spur from its branch railway for the purpose of giving a better outlet for the coal output of the Deserto and Caiti mines.

A decree of November 6, 1918, authorizes the State of Maranhão to construct works for the IMPROVEMENT OF THE PORT of S. Luiz do Maranhão and to use and operate same for a term of 60 years.

The COMMERCIAL ASSOCIATION of Rio de Janeiro received and entertained at a special meeting held on January 9 last a committee of the Board of Trade of the United States. In the addresses made on that occasion a number of ways of promoting trade and binding closer the commercial relations between the two countries were discussed, special preference being given to commercial arbitration.

In accordance with an order of the State government, the city of São Paulo is authorized to inaugurate an agricultural, industrial, and stock EXPOSITION on April 21 next.

In 1916-17 the production of SUGAR in the State of São Paulo consisted of 612,924 sacks, valued at 22,226 contos (paper conto = about \$250), and 103,186,255 liters of aguardiente, valued at 31,929 contos.

A prime factor in the industrial prosperity of the State of São Paulo was the development of the RAILWAY SYSTEM from 2,894 kilometers in 1895 to 6,277 in 1915. The merchandise transported over this railway system in 1895 aggregated 1,170,176 tons, as compared with 6,082,863 tons in 1915. The receipts in 1895 and in 1915 were, respectively, 55,417 and 110,234 contos, and the expenditures 27,473 and 59,614 contos.

In 1917 the imports of AUTOMOBILES through Santos numbered 1,133, valued at 3,608 contos. Of these machines 1,127 came from the United States.

CHILE.

The Chilean COMMERCIAL COMMISSION which the Government is sending to study the economic conditions of the United States, will arrive in April to begin the tour which it is hoped will develop more intimate commercial relations between the two countries. The commission is composed of Sr. Eliodoro Yáñez, formerly Minister of the Interior and at present senator of the Republic, who is chairman, and Juan Enrique Tocornal, formerly Minister of Foreign Relations, and Augusto Villanueva, ex-superintendent of commerce and director of the Bank of Chile. Sr. Manuel Amunátegui, consul general of Chile in France, will act as commercial adviser.

With the object of carrying into effect an agricultural propaganda to stimulate the production of wheat, the writers on agricultural topics of the fourth agricultural district have decided to open a WHEAT CONFERENCE in which all cultivators of the grain who request the privilege may take part upon the presentation of their applications to the authority of the district.

The English company, Vickers Sons, has just presented a proposal to the Minister of Industries, through the legation in London, for the establishment of COMMERCIAL AERO-NAVIGATION in the country. The enterprise is to undertake the aerial transportation of mail, passengers, and freight.

On January 11 of the present year the Association of NITRATE PRODUCERS of Chile was organized in Valparaiso and its statutes approved. The principal object of the new association is to compete aggressively with other fertilizers with which the market has been flooded since the opening of the war.

Since the 15th of January the wireless telegraph station of Valparaiso has been making daily reports of the METEOROLOGICAL CONDITIONS of certain points on the coast and the island of Juan Fernandez.

The Chamber of Deputies recently approved the President's project of encouraging THE FISHING INDUSTRY by the payment of bounties for the period of 10 years.

An Italian CHAMBER OF COMMERCE, composed of prominent members of the colony, heads and representatives of Italian commercial houses, etc., has recently been organized in Santiago.

The Government has taken steps to encourage beet cultivation in every possible way in order to foster the SUGAR INDUSTRY.

The recently completed MAUCO CANAL, fed from the Aconcagua River in the Department of Quillota, has been opened by governmental decree. The canal, which is 80 kilometers long and will irrigate 5,000 hectares, cost 2,150,000 pesos, and it is estimated that the value of the land it irrigates will be increased by 10,000,000 pesos.

A British COMMERCIAL MISSION is at present visiting Valparaiso with the purpose of promoting trade between the two countries concerned and preparing the field for English manufacturers.

A contract by which the Arica-La Paz Railway Co., is authorized to run freight as well as passenger trains over the lines of the Antofagasta-Bolivia Railway line as far as the city of La Paz was recently signed by the directors of the two companies.

The board of directors of the Federal railways (Ferrocarriles del Estado) will hold a RAILROAD CONFERENCE in Santiago in September with a view to improving the service by methods to be discussed at its sessions. The conference will be divided into the following sections: General administration, exploitation, traction and employees, and extension and improvements.

A decree fixing the requirements of concessions for the construction of PRIVATE DOCKS has been issued. The decree states the data which applicants must present before permission is granted.

The general board of directors of the Federal railways has been authorized to set aside 2,000,000 pesos for various RAILWAY IMPROVEMENTS.

COLOMBIA.

The Chilean legation in Colombia is fostering COMMERCIAL RELATIONS with Colombia in every possible way. Chilean boats hereafter will call at Colombian ports on the Pacific.

A machine for SPINNING SILK, invented by a business man of Bucaramanga, has been tried in that city and found very satisfactory.

The National Congress of 1918 passed a law encouraging the exportation of COLOMBIAN PRODUCTS according to which every article intended for exportation shall bear a card, wrapping paper, or tag, depending upon the shape of the package, marked "Made in Colombia" (Producido en Colombia), without which it will not be permitted to leave the country. Every year two medals, one of gold and the other silver, are to be awarded the exporter who has packed and presented his goods in the manner most convenient for shipment to foreign countries. The law also contains stipulations tending to foster agriculture.

The government of the Department of Valle has signed a contract with G. Amsinck & Co., of New York, for the construction of the PIER AT BUENAVENTURA. The firm will lend a million dollars to the Department, part in cash at 8 per cent interest and the remainder in necessary materials, bearing 6 per cent interest. The pier will be 152 meters long and 36 wide.

A decree has been promulgated which amplifies the measures to be considered at the meeting for the election of chief and assistant chief of the officers of information and COMMERCIAL PROPAGANDA of the Republic, created by Law 11 of 1918, and associated with the consulates of London, Paris, and New York.

The press of Barranquilla states that the Emergency Fleet Corporation of the United States has released a fleet of MERCHANT SHIPS to the United Fruit Co. The 12 vessels in the fleet will furnish a regular service between Colombian and United States ports.

According to a recent presidential decree an industrial, agricultural, and commercial exposition is to be held in Bogota August 7. The Government is desirous of making the event a worthy celebration of the date it is to commemorate by diffusing information concerning Colombian products, especially those suitable for exportation. A committee composed of the Minister of Agriculture and Commerce, and the presidents of the National Agricultural Association and the Chamber of Commerce of Bogota has been appointed to promote the exposition.

The Chamber of Commerce of Cali has adopted an agreement to inscribe on the BLACK LIST of the organization the names of business men who fail, who do not pay bills, who fail to meet obligations, etc.

According to advices received by the Colombian press from the legation of Colombia in London, ENGLISH STEAMSHIP SERVICE will soon be reestablished on the prewar basis, and English vessels will call at Colombian ports at regular intervals.

The number of GOLD MINES denounced in the Department of Antioquia in the year 1918 totaled 289.

CUBA.

Regular FRENCH MAILBOAT SERVICE is soon to be reestablished between the ports of St. Nazaire, El Havre, La Habana, and Vera Cruz. For the present the transatlantic liners *Espagne* and *Lafayette*, which formerly were named *Cuba* and *Flanders*, will conduct the mail service.

The Quaker City Supply Co., a merchant corporation of Philadelphia, which conducts a large export and import business, has decided to establish a LINE OF STEAMSHIPS between Philadelphia and Cuban ports. The trip will be made every two weeks by two steamships, both of 4,000 tons.

By a presidential decree the Cuba Central Railways Co. has been granted an extension of one year for commencing and three for completing the PORT WORKS at Isabela de Sagua, the construction of which was authorized on June 29, 1917.

According to the report of the Secretary of Agriculture, the CUBAN SUGAR CROP this year is normal. By the end of February 192 mills were running at capacity rates and 979,200 metric tons of sugar had been received at port cities and 512,120 tons had been exported. By the last week of February, 955,844 tons had been received at ports and 398,669 tons exported.

Owing to the extraordinary demand for passage to Spain, the Pinillos Steamship Co. has agreed to place five of her best TRANS-ATLANTIC LINERS on the line between Cuba and Spain during the coming summer. The boats selected are the *Infanta Isabel*, the *Cadiz*, the *Barcelona*, the *Valbanera*, and the *Conde Wilfredo*, which will also transport cargoes of merchandise.

During the first part of December the CHAMBER OF COMMERCE of Holguin was organized. A provisional governing board was elected, of which Sr. Saturnino Garcia was made president.

In Cienfuegos a company called the Cienfuegos Molasses & Fuel Co. (Compañía de Micles y Combustible de Cienfuegos) has been organized with an aggregate capital of \$550,000. The company will exploit MOLASSES, its exportation, and the manufacture of products in which it is a prime element. The company has issued bonds to the value of \$450,000, which have been bought by members of the board of directors.

Steps are being taken in Habana toward the establishment of an ENGLISH CHAMBER OF COMMERCE. Although not very numerous, the English colony in the Cuban capital is rich and influential, and the commerce conducted by Cuba with Great Britain is quite extensive.

The production of HONEY in 1917-18 amounted to 165,000,000 gallons, of which 125,000,000 gallons were exported.

The SUGAR CROP of 1919, estimated at 4,000,000 tons and having a value of over \$500,000,000, promises to exceed all previous records.

The steamship *Morro Castle* of the Ward Line last January inaugurated weekly STEAMSHIP SERVICE between the United States, Cuba, and Mexico. The route will be run by the steamships *Mexico*, *Esperanza*, and *Monterrey*, which will leave New York and call at Habana, Progreso, Vera Cruz, and Tampico.

During the latter part of January work was commenced on the ELECTRIC RAILWAY of Sancti Spiritus, which will connect the city with Guayos, Neiva, Cabaiguan, and Santa Lucia.

DOMINICAN REPUBLIC.

The chamber of commerce, industry, and agriculture has recently opened an office of COMMERCIAL INFORMATION in the city of Santo Domingo, presided over by Sr. Abelardo R. Nanita.

During the last quarter of 1918 the TRAFFIC AND FREIGHT movement of the Dominican Central Railway reached a total of 11,090,545 kilograms of merchandise and products transported.

The first section of the EASTERN HIGHWAY has been entirely completed. It is 16½ kilometers long, and connects the city of Santo Domingo with San Pedro de Macoris.

ECUADOR.

A presidential decree of the 10th of January, 1919, authorizes the customhouse at Guayaquil to permit the EXPORTATION OF PROVISIONS to the extent of 500 quintals of potatoes and 50 quintals of butter per month.

GUATEMALA.

According to official statistics, Guatemala manufactures annually about 100,000,000 cigarettes, valued at \$185,000, and 3,000,000 cigars, worth \$75,000, the principal factories being located in Guatemala City and Quezaltenango. Since Guatemala produces very little TOBACCO, most of the prime material is imported from Honduras to be made up, but almost the entire product of the factories is consumed within the Republic, except for very small quantities that are exported to neighboring countries.

The 1918 production of white SUGAR is unofficially placed at 42,000,000, and of brown sugar at 100,000,000 pounds. Of these amounts, some 30,000,000 pounds of white sugar were exported, and 3,000,000 of brown sugar, as the latter is used extensively within the Republic in the making of alcohol and liquors. Brown-sugar mills are numerous throughout the country, whereas white sugar is produced almost exclusively in the Department of Escuintla, on the Pacific slope. Although in 1918 exportation of sugar was prohibited except by special license from the President of the Republic, 75 per cent of the total crop was sent to foreign markets. By far the greater part of this sugar went to Mexico, some to British Honduras, and the remainder to the Republic of Honduras.

HAITI.

A large increase took place in nearly all the EXPORTS from Haiti in 1917, and many articles were shipped during the year that did not enter into the export trade in 1916. Corn was a new export item, the shipments of which amounted to 1,219,536 pounds, nearly all of it going to Cuba, where the merchants realized a good price. In consequence a considerable increase occurred in the production in Haiti. Two crops can be raised a year on this island.

The export of CASTOR BEANS has largely increased, and at this time much attention is being paid to their cultivation, to which none was previously given. The plant grows wild in all parts of the country, and the industry will certainly prove to be a profitable one.

A large SUGAR COMPANY has expended more than \$2,000,000 in erecting an extensive plant, providing buildings for the employees, and clearing for cultivation large tracts of land, principally in the plains of the Cul-de-Sac. This company gives employment to about 1,500 laborers, in addition to the skilled workmen.

According to the official report of the American consul at Port au Prince, the more important HAITIAN PRODUCTS exported to the United States in 1917 were as follows: Logwood, \$110,546; coffee, \$466,270; castor beans, \$92,857; cotton, \$60,235; goatskins, \$59,508; lignumvitæ, \$28,249; honey, \$23,721; cocoa, \$19,531; hides, \$15,583. The total value of the exports for the year amounted to \$903,102, an increase of \$333,191 over 1916.

MEXICO.

With the object of encouraging intensified farming in the State of Morelos, the President of the Republic has authorized the Department of Agriculture to present to the government of the State a large assortment of AGRICULTURAL MACHINERY, including 500 plows with harness equipment, thrashing machines, and other farm implements. The department will endeavor to obtain the implements from the United States at such a price as will make it possible to sell them at cost to individuals and companies who are undertaking the reconstruction of farms and ranches in Morelos.

The President has issued a decree by which the EXPORT TAX ON COTTON is lowered to 2 centavos a kilogram, with the hope of creating a foreign market for the surplus of the crop produced in Laguna and Lower California in 1918. By another presidential decree the TAXES ON DOMESTIC WINES are lowered for the purpose of increasing the foreign demand.

The Mexican MERCHANT SHIP *Rafael Miranda* has just been launched in the port of Mazatlan, where it was constructed for a Mexican owner. The new vessel draws $2\frac{1}{2}$ meters and has a capacity of 148 tons.

In accordance with the wish of the President, the Secretary of the Treasury and Public Credit has commenced the consideration of vital reforms of CUSTOMS TARIFFS tending toward more efficacious protection of Mexican commerce with Central and South American countries. With the same end the Secretary of Industry is considering a project presented to him suggesting the organization of a steamship company with a capital of 32,000,000 mexican pesos to be subscribed by the Governments of Mexico, Peru, Chile, Venezuela, Nicaragua, Salvador, Guatemala, and certain other countries which later will become interested in the extension of their trade relations.

Press reports state that the results of the governmental measure by which FREE RAILROAD TRANSPORTATION is given to business men en route to any part of Morelos were entirely satisfactory, since during the short time the system has been in use the commercial life of the State has become normal.

During 1918 the production of PETROLEUM was 63,838,326 barrels, or approximately 10,000,000 cubic meters, a quantity which exceeds the production of 1917 by 8,000,000 barrels, as in the year cited the amount produced was 55 millions of barrels.

The Secretary of the Treasury has granted permission for the exportation of 10,000 bales of COTTON to Spain. This is the first permit granted for exportation of this character.

In accordance with a presidential resolution, on March 1 a conference of MEXICAN CONSULS who are stationed in the United States was held in El Paso, Texas, presided over by the Mexican consul general at large for the southern part of the United States and by the financial agent of the Mexican Government in El Paso. At the conference everything relating to the tariffs to be fixed for the legalization of contracts between Mexicans in the United States, and for the collection of duties on commercial accounts of United States products exported to Mexican markets, was discussed.

A TECHNICAL COMMISSION will shortly be sent by the National Geological Institute to the western States of the Republic to study the natural resources of the Pacific coast region of Mexico, with especial reference to oil sections which are said to exist in the territory to be explored.

The Secretary of Agriculture and Industry has authorized the allotment of land and necessary materials to the first 300 English settlers who have arrived at the port of Mazanillo with the object of founding a BRITISH COLONY in the State of Colima.

The Chamber of Commerce of Valparaiso has informed the Mexican Government that early in February the new CHILEAN COMMERCIAL AGENT to Mexico, Sr. Juan Duhamery, sailed for Salina Cruz on a vessel laden with Chilean commercial products.

In a detailed and scholarly report which the engineer, Trinidad Paredes, has presented to the Secretary of Industry and Commerce,

it is estimated from the OUTCROPPINGS OF IRON in Mexico that the deposits will yield 242,978,000 tons of mineral as a minimum, and its exploitation is urged as a paramount need of the country.

The National Biological Institute recently sent one of its agents to the State of Puebla to conduct an investigation of the MOSS known as "*Sphagnum papillosum*," an absorbent far superior to cotton, which is found in abundant quantities in the marshy sections of the States of Puebla Oaxaca and Mexico. According to data published in regard to it, this moss is smoother, softer, and finer than cotton and has greater qualities of absorption, absorbing 18 times its own weight. The best-known species are: "*Papillosum*," "*compactum*," "*wulfiamin*," "*aquarrosum*," "*cuspidatum*," "*subsecundin*," and "*capillaceum*." The Government intends to use the vegetable product in Mexican hospitals exclusively, not only because of its desirability from a professional point of view, but also because of its economical cost. Its principal characteristic is that it absorbs pus three times as quickly as the finest cotton and retains liquid so completely that recoveries when it is used should be effected in the majority of cases because irritation is practically absent.

According to telegraphic notices, RAILROAD TRAFFIC on the line of the Northwestern Railway of Mexico was reestablished the middle of February from the city of Chihuahua to the frontier at Ciudad Juarez, over the western part of the State across the Sierra Madre Range.

NICARAGUA.

Nicaraguan farmers are congratulating themselves upon the HIGH PRICES brought by their products in foreign markets. The high quotations on coffee are gratifying owing to the abundant crop just harvested of this commodity. Rice also was cultivated in large quantities last year with happy results, due to the establishment of modern milling appliances in various parts of the Republic for its preparation. Corn and kidney beans were produced so extensively that they were exported in quantities.

PARAGUAY.

During the past six years the FOREIGN COMMERCE of Paraguay amounted to the following sums in gold coin: 1913, importation, \$8,119,997, exportation, \$5,630,929; 1914, \$5,149,465 and \$4,584,358; 1915, \$2,405,888 and \$5,616,172; 1916, \$4,680,024 and \$4,861,678; 1917, \$5,098,581 and \$6,494,802; and 1918 (11 months), \$5,783,183 and \$5,632,093.

The Stock Raising Association of Paraguay recently organized a STOCK FAIR which will be held annually beginning next May. The organization does not intend to confine the exhibition to cattle only but will exhibit domestic animals of various kinds. In order

to widen the scope of the fair, business men of the neighboring Republics, as well as those of Paraguay, will be invited to attend.

PERU.

A syndicate of capitalists and manufacturers has been organized in Lima to work the Huaday COAL DEPOSITS, Department of La Libertad. To facilitate this undertaking a wagon road 70 kilometers long will be built to Pinchaday. It is proposed to change this highway into a railroad as soon as the mining of coal on a large scale is begun.

A committee of civil engineers has been appointed to recommend to the Government the most feasible and desirable of the different surveys made for the construction of the Jatunhuasi RAILWAY.

The Lima to Lurin railway, the construction of which was commenced under the administration of President Billinghurst, was completed and opened to traffic during the latter part of 1918. The road is 46 kilometers long.

Congress has authorized the executive power to build a BRANCH RAILWAY from kilometer 76 on the Chimbote to Recuay line to Cajabamba.

A decree of January 7, 1919, construes article 4 of Law 2727 as meaning that the export duty on all grades of wool shall be 2 shillings per Spanish quintal of 100 pounds, gross weight, when first quality Arequipa washed wool is quoted in Liverpool at 14d. per pound, in addition to the 10 per cent on gross value, according to grade, of the exported wool.

The municipal council of Lima has appointed a commission to regulate the BAKING INDUSTRY, with authority to prescribe weight of loaf, quality, prices, etc. The object of the law is the protection of consumers.

The Treasury Department has fixed 45 soles (sol=about \$0.50) as the maximum selling price per ton of PETROLEUM in Lima and Callao.

SALVADOR.

The presidential decree prohibiting the exportation of BROWN SUGAR AND SIRUP has been waived until March 31, 1919.

The CHAMBER OF COMMERCE of Salvador has been reorganized with the following board of directors: President, Sr. Felix Olivella; vice president, Sr. Herbert de Sola; secretary, Sr. José Dutriz; treasurer, Sr. Valentín Sesti; librarian, Sr. Mauricio Dreyfus.

URUGUAY.

In almost all parts of Uruguay there are deposits of MANGANESE ORE, some of considerable extent. One of the most valuable is in the Department of Rivera near Zapucay Creek, there being two

veins from which, according to estimates, 80,000,000 tons of the mineral may be extracted. The beds occur in an area of 22,000 acres owned by the Uruguay Manganese Co., a company formed several years ago in Montevideo and composed largely of English capitalists.

During the past five years—that is to say, while the war was in progress—FOREIGN COMMERCE was conducted to the following extent: 1914, importation \$32,431,791, exportation \$48,555,429; 1915, \$29,031,697 and \$60,194,284; 1916, \$29,643,547 and \$56,327,951; 1917, \$30,923,835 and \$83,506,267; 1918, \$30,408,807 and \$94,618,914.

The Japanese steamship company Osaka Shosen Kaisha in January started a NEW JAPANESE LINE between the ports of the Orient and those of the Rio Plata and Brazil. Three steamships are to ply at present, all of 10,000 tons capacity and with large passenger accommodations, from Brazil to Cuba and certain ports of the United States, returning to Japan via the Panama Canal. As will be noted, the trip is a much longer one than any other in operation, since the round trip will require nearly eight months.

VENEZUELA.

An idea of the increasing importance of the industry of PEARL FISHING in the island of Margarita may be obtained from noting that since January, the opening of the season, more than 4,000 fishermen and 800 boats have been engaged in the traffic, which is one of the most important of the region. By the 1st of February 52,700 bolivars had been received in the treasury for privileges and exclusive rights.

The President of the State of Bolívar has ordered the publication of a book to be called ESTADO BOLIVAR which will contain data and information concerning the industrial and economic development of the State.

To the end of saving the channel of the Caurimare River from destruction by erosion and of enlarging the territory in use by the agricultural and forestry experiment station, the President has condemned the private property known as San Rafael, or "Cero de Arvelo," situated on the southern bank of the river within the boundaries of the municipality of Pachoco in the Sucre district of the State of Miranda, to be incorporated in the experiment station.

In view of the fact that different articles of merchandise grouped together under the same number of the tariff law frequently are not described by the importer by their proper terms and by correct numbers, but in the consular invoice the entire paragraph relative to the merchandise is inserted, annoyance and inconvenience is thereby caused to the customs officials and in the preparation of statistics. On this account the President recently issued new tariff regulations, according to which, when distinct articles of merchandise

are imported which are comprehended under the same tariff schedule, they may be designated in the consular invoice by the name under which they are listed in the tariff law, goods being considered improperly classified when they appear in the invoice under names which are not particularly applicable to such goods. The decree will become effective in the customhouses of the Republic on May 1, so that goods which arrive from Europe after that date, or from other foreign parts beginning April 1, must be shipped with regard to the foregoing regulations.

ECONOMIC AND FINANCIAL AFFAIRS

ARGENTINE REPUBLIC.

During the first 11 months of 1918 the CUSTOMS AND PORT DUES of the Argentine Republic amounted to 65,599,961 gold pesos (gold peso = \$0.9645), consisting of import duties, 35,905,866 pesos; export duties, 20,722,941 pesos; and other receipts, 8,971,154 pesos.

During the first nine months of 1918 the sale of REAL PROPERTY in Buenos Aires had a total value of 72,636,181 pesos, as compared with 113,351,526 pesos in 1917; 112,860,884 pesos in 1916; 103,892,208 pesos in 1915; and 140,266,807 pesos in 1914.

According to a report of the Bureau of Commerce and Industry the number of STOCK COMPANIES in operation in the Argentine Republic in 1917 was 840, of which 69 per cent, or 581, were Argentine, and 31 per cent, or 259, were foreign companies. Among the foreign corporations the English occupied the first place with 150 companies, or 58 per cent, followed by the United States with 28 corporations, Belgium with 25, France with 19, and Germany with 12. The Argentine commercial companies had a paid-up capital of 718,422,594 pesos currency, and the foreign companies 459,914,551 pesos currency. The capital of Argentine industrial corporations is given as 303,350,085 pesos, and that of foreign corporations 220,863,057 pesos. The paid-up capital of Argentine companies engaged in the exploitation of railways is 22,565,000 pesos, as compared with 2,923,570,753 pesos invested by foreign companies. The Argentine stock companies employ 80,470 persons, including directors, employees, and workmen, while the foreign companies employ 154,021 persons.

BRAZIL.

A TAX ON CONSUMPTION collected in the State of São Paulo in 1917 amounted, approximately, to \$7,515,000, or an increase of over 25 per cent on the collections of 1916.

CHILE.

The BANK OF CHILE, which was the result of a fusion of the Valparaíso agricultural and national banks on January 2, 1894, and which began business with a subscribed capital of 40,000,000 pesos and a paid-up capital of 20,000,000, recently completed the twenty-fifth year of its existence. In 1906 the subscribed capital of this bank was increased to 60,000,000 pesos, in 1910 to 80,000,000, and in 1917 to 120,000,000, and the paid-up capital to 40,000,000 and 60,000,000, respectively. At the present time the bank has a reserve of 36,000,000 pesos paper and 5,000,000 gold, and in addition to its offices in Valparaíso and Santiago it has its own office in London and 46 branches in different parts of Chile.

An executive decree postpones the conversion of legal tender PAPER MONEY until December 31, 1919, and forbids exports of gold under penalty of confiscation.

A CHATTEL MORTGAGE BANK has been organized in the city of Valparaíso. Loan banks which were formerly inspected by the Department of Justice have now been placed under the supervision of the Department of Finance.

According to a report of the Minister of Finance the national revenues in 1918 amounted to 109,174,000 gold pesos and 132,202,000 pesos currency. The liabilities in gold were 48,414,000 pesos, leaving an excess of gold pesos of 60,760,000. The gold excess, reduced to pesos, was equivalent to 85,063,000 pesos currency, which added to the 132,202,000 pesos currency already mentioned made an available currency fund of 217,265,000 pesos, and left, after liquidating the currency expenditures of 215,722,000 pesos, a currency surplus of 1,543,000 pesos.

The total amount of the CONVERSION FUND, which on December 31, 1917, was 94,144,558 gold pesos, rose on January 1, 1919, to, approximately, 110,000,000 gold pesos.

On January 1, 1919, according to a statement published in the *Revista Económica* the PUBLIC DEBT of Chile was as follows: Internal debt, gold, 157,589,000 pesos; internal debt, currency, 76,600,000 pesos; guarantees and interest for construction of railways, gold, 100,000,000 pesos, and foreign debt, gold, 400,000,000 pesos. The debt, including interest and amortization, requires an annual expenditure by the State of nearly 40,000,000 pesos, gold, consisting of the following items: Foreign debt, 29,576,000 pesos;

fiscal guarantees, 8,197,000; internal gold debt 390,000 and internal currency debt 1,812,000 pesos. These payments amount to about 30 per cent of the usual revenues of the State.

The inventory of Government properties issued at the beginning of the present year show 9,542 properties belonging to the State, with a value of 330,156,517 pesos, of which 5,335 registered properties are valued at 303,101,478, and 4,207 nonregistered properties are valued at 27,055,038 pesos.

According to a report of the superintendent of customhouses the CUSTOMS REVENUES of Chile in 1918 amounted to 384,766,635 pesos gold, made up of imports, 167,360,403; exports, 111,817,376; and surcharges, etc., 105,588,856.

COLOMBIA.

According to a decree which establishes the by-laws to article 92 of Law 15 of 1918 concerning certificates of GOLD BULLION, anyone may deposit gold bars properly assayed in the mints of Bogotá and Medellín, receiving in exchange certificates representing the cash value of the gold so consigned reduced to Colombian money.

A banking institution under the name of BANCO LÓPEZ has recently been founded in Bogotá with a capital of \$2,000,000 distributed in shares of \$100 each. The primary object of the bank will be to foster the exportation of Colombian products.

It has been decreed that Federal officers accounting for national funds may receive at par in payment of all public revenues on the footing of national currency the British pound and half pound sterling, and bills representing the same, issued by the English Government or by the Bank of England.

COSTA RICA.

By a law promulgated December 14, 1918, the President is authorized to issue BONDS to the sum of 10,000,000 colones, payable to bearer, to be used for the conversion of the part of the internal debt represented by government bonds on internal obligations in the form of promissory notes, coupons, or drafts on the Treasury for salaries, miscellaneous expenditures, and rentals, extended prior to the 30th of last September, and for interest to the 31st of December on loans which remain subject to an extension of two years after the signing of European peace. These bonds will bear interest at the rate of 9 per cent annually, payable quarterly. To liquidate the interest and payment of the bonds a tariff is established on the consumption of leaf tobacco and manufactured tobacco, on benzine, cigar lighters, all kinds of playing cards, foreign liquors, and public theaters.

On January 6 the President of the Republic issued a RULING concerning the conversion of the internal debt and the creation of

funds for this purpose by the execution of law No. 3 of December 14, 1918. The Minister of the Treasury will issue bonds payable to bearer of the denominations of 1,000 and 100 colones. The 16th of next September was fixed for the first drawing of bonds and the same date of every coming December, March, June, and September. The payment of bonds and interest-bearing coupons to the holders will be made by the chief administrator of funds on the day following that of the publication in La Gaceta of the results of the drawing.

DOMINICAN REPUBLIC.

The government has authorized the PAYMENT OF IMPORT DUTIES, established by the internal-revenue law of 1918, in stamps of current legal issues in use October 1, 1918, until the supply of such stamps be exhausted.

On December 9, 1918, the BUDGET LAW for 1919, in which the general receipts are estimated at \$7,973,000, was passed. The expenditures are distributed in the following manner: Interest and payment of the Dominican loan, interest and payment of the debt of 1918, appropriation for public instruction, expenses of the municipal government, public works and reserve fund, \$3,550,500; legislation, \$8,280; executive department, \$28,360; judiciary department, \$558,630; interior administration and police, \$1,175,095; exterior relations, \$65,583; commerce and finance, \$487,304; justice and public instruction, \$462,500; agriculture and immigration, \$198,545; public works and communications, \$532,516. The figures of receipts and expenditures show a surplus of \$33,686.

According to presidential decree No. 247 the municipalities whose receipts exceed 10,000 pesos annually shall set aside not less than 15 per cent of such receipts for SANITATION, beginning January 1, 1919.

The amount expended for REPAIRS OF PUBLIC BUILDINGS during the period between July 1, 1917, and November 30, 1918, totaled \$84,963.39. During the same period \$2,960.85 was used in the repairing of wharves and \$18,774.56 in the establishment of the agricultural station at Haina.

During the fourth quarter of 1918 the receipts of the TELEPHONE STATIONS of the Republic were \$15,263, as against \$6,343 of the corresponding period of 1917.

The receipts and expenditures of the DOMINICAN CENTRAL RAILWAY were \$487,657 and \$295,765, respectively, in 1918, compared with \$381,824 and \$271,988 in 1917. The profits of 1918 were \$191,894 and of 1917, \$109,836.

GUATEMALA.

According to the reports of the banks of Guatemala for the second half of 1918, the profits of the BANK OF GUATEMALA

amounted to 2,123,132 pesos national currency, of which 127,387 pesos were distributed among the organizers in conformity with Article XVI of the statutes of the bank. 1,000,000 were paid in dividends, 106,156 to eleemosynary institutions, 304,975 for an increase in the reserve fund, and 584,612 for an increase in the emergency fund. The Banco de Occidente reports profits of 2,553,212 pesos, distributed as follows: Reserve fund, 1,000,000; emergency fund, 650,000; dividends, 40 pesos per share, 660,000; additional dividend of 5 pesos per share, 82,500; tax for eleemosynary institutions. 126,247; loss and gain account, 34,465 pesos.

HONDURAS.

The general condition of PUBLIC REVENUES in the fiscal year 1917-18 was as follows: The net receipts reached 4,805,781 pesos, or 801,678 pesos less than in the year 1916-17. As the expenditures of 1917-18 amounted to 5,423,073 pesos, a deficit of 617,292 pesos remained, which was met by the 213,107 pesos which were available July 31, 1917, and 404,184 pesos which the Atlántida Bank lent the Government for meeting obligations.

MEXICO.

The newspapers of Mexico announce that, in conformity with the authorization of Congress to the President to contract for three foreign loans, the assistant secretary of the Mexican treasury is at present in the United States negotiating in behalf of the Government with various business houses for a LOAN FOR ROLLING STOCK to the sum of 50,000,000 pesos.

The MEXICAN NATIONAL MINT in the first 50 days of the present year coined slightly over 3,000,000 pesos in Hidalgo quarters, pesos, and new testones.

According to a table recently published by El Universal of Mexico illustrating the condition of the PUBLIC NATIONAL DEBT, this sum in round numbers totals 575,000,000 in Mexican pesos. The principal items are the interior consolidated debt of 3 per cent, the internal amortization debt of 5 per cent, the foreign municipal loan of 5 per cent, the foreign loan of 1899 of 5 per cent, the foreign loan of 1904 of 4 per cent, the foreign debt of 1910 of 4 per cent and unpaid interest on various sums.

NICARAGUA.

By a law of December 31, 1918, Congress voted that the NATIONAL BUDGET for 1919 should carry the same appropriations as did that of the previous year.

PANAMA.

The municipality of Panama has been authorized by the National Assembly to contract a MUNICIPAL LOAN, as prescribed by Law 43 of 1913, at 9 per cent interest annually, and to arrange for advances in installments as needed, in order that payment of interest upon the whole sum or the entire time may not be necessary.

PARAGUAY.

The following statistics show the CUSTOMS RECEIPTS in the three past years: 1916, 717,067 pesos gold and 27,260,337 pesos paper; 1917, 952,430 pesos gold and 39,705,149 pesos paper; and 1918 (11 months), 813,076 pesos gold and 29,313,071 pesos paper.

By a presidential decree of January of the present year a tax of \$2 gold was levied on every head of BEEF CATTLE to be refrigerated or salted. The decree applies to male beasts of any age or size and to female animals of over 9 years.

PERU.

The Peruvian BUDGET FOR 1919 estimates the receipts and expenditures at £5,169,147, distributed as follows: Ordinary receipts £3,972,997; extraordinary receipts, £1,196,150; total ordinary expenses, £2,680,767, distributed in the following manner: Government, £634,690; foreign relations, £52,765; justice, £314,732; treasury, £454,304; war and navy, £806,064; industry, £418,209. Extraordinary expenses, to the amount of £2,286,570, distributed as follows: Government, £22,414; foreign relations, £19,955; justice and public instruction, £469,065; treasury, £1,386,103; war and navy, £34,444; industry, £355,587; and expenditures for the National Congress, £201,809.

SALVADOR.

The President has completed the reorganization of the Salvadorean section of the INTERNATIONAL HIGH COMMISSION, with the following personnel: President, Sr. José E. Suay; secretary, Dr. F. Tomás Mirón; members, Dr. Francisco A. Lima, Dr. Lucio Quiñones, Dr. Miguel Gallegos, Dr. Belarmino Suárez, Dr. Isidro Moncada, Dr. Rafael Guirola Duke, Sr. Roberto Aguilar, and Sr. Mariano Zeceña.

According to the report of the BANK OF SALVADOR (Banco Salvadoreño) for the second half of 1918, its profits during that period, after deducting general expenditures, were 248,793 pesos. silver, its assets in cash being \$1,190,607, gold, which, at 140 per cent of exchange, gives a total of 2,933,543 pesos, silver, which

amount added to discounted open credits and obligations to be collected, shares of other institutions, mortgage loans, removable stock, furnishings, etc., gives a total of 11,765,611 pesos, silver. The net profits of the AGRICULTURAL COMMERCIAL BANK (Banco Agrícola Comercial) in the same half year were 35,327 pesos, silver, its profits reaching a total of 4,388,194.61 pesos. The authorized capital of this bank is 5,000,000 pesos; its paid capital, 1,300,000; its reserve fund, 130,000; and its fund for contingencies, 202,275 pesos.

URUGUAY.

For the month of October, 1918, the RESERVE FUNDS in gold in the banks amounted to \$48,027,158, as against \$47,973,754 during the previous month. Of the total \$43,847,768 was deposited in the Bank of the Republic and \$4,180,390 in other banks.

By a law of December 5, 1918, the Bank of the Republic was authorized to extend a CREDIT TO FRANCE on account current of \$15,000,000, gold. The loan will fall due at the expiration of two years from the date of its granting, will be renewable by mutual agreement, and bears interest at the annual rate of 5 per cent. The balance will be paid when due in gold coin.

By a law of December 5, 1918, the Bank of the Republic was authorized to extend the CREDIT TO THE BRITISH GOVERNMENT agreed upon February 2, 1918, to \$20,000,000, gold. A part of this loan, and likewise a part of that conceded to France, will be employed in the purchase of cereals.

VENEZUELA.

According to the latest report of the Bank of Caracas, the net profits of this institution in the second half of 1918 amounted to 310,129 bolivars. On December 31 the reserve fund of the bank was 1,118,358 bolivars and collateral 500,000 bolivars. The deposits in the savings department on the same date amounted to 925,859 bolivars.

The municipal council of Caracas has estimated the probable PUBLIC EXPENDITURES of the Department Libertador in 1919 at 3,610,000 bolivars. Of this sum 130,000 are to be used for public improvement, 550,000 for public illumination, 137,700 for public instruction, and 150,000 for public works. The probable revenue for public expenditures in the Department of Vargas is estimated at 330,000 bolivars.



INTERNATIONAL TREATIES

ARGENTINE REPUBLIC.

The Governments of ARGENTINA and PERU early in January, 1919, signed at Buenos Aires a convention on commissions to take testimony, letters rogatory, and other documents intended to simplify points agreed upon in the treaty of law procedure signed at Montevideo in 1889. According to the convention last signed, rogatory commissions issued by one country to take effect in the other need not, when such commissions are presented through diplomatic agents, or in default of diplomatic, through consular agents, be legalized as to the signatures thereof. If the commissions are granted on the petition of a party in interest, then there shall be set out therein the name of some attorney or agent who within the country where the commission is to be executed shall be responsible to the authorities of the country for the expenses incurred. When the commissions are of an official character, the expenses occasioned thereby are at the charge of the country to which they are sent. The convention has no fixed period of termination, but may be terminated by either country on one year's notice.

BOLIVIA.

On the 6th of January, 1919, in Buenos Aires, a treaty of FRONTIER PATROL was signed between Argentina and Bolivia. The convention stipulates reciprocal response from the border guards at the first alarm along any point of the frontier. The police may cross the frontier of the neighboring country only to effect immediate capture of a known marauder and safeguard the interests of the citizens in both countries. Military garrisons are authorized to detain suspects until their presence may be explained satisfactorily and the reasons for their crossing the frontier made clear; in every case indictments must be sent to the country from which the suspects came and telegraphic reports be procured before allowing them to proceed.

BRAZIL.

An ARBITRATION CONVENTION with Peru, concluded on July 11, 1918, and which had previously been approved by the Brazilian Congress, was ratified by the President of Brazil on December 23 last.

After the approval by the Brazilian Congress of the treaty between Brazil and Uruguay concerning the LIQUIDATION OF DEBTS. said treaty having been concluded in Rio de Janeiro on July 22, 1918, the same was duly ratified by the President of the Republic.

ECUADOR.

On the 21st of June, 1918, ratification of the GENERAL TREATY OF ARBITRATION was exchanged between Ecuador and Italy in Rome as signed in Quito February 25, 1911. By this treaty the contracting parties agree to submit to arbitration all questions which may arise between them provided that by diplomatic channels a direct solution is not arrived at, except in those cases which affect their vital interests, their independence, or their national honor. In questions of the competence of judicial authority, according to the territorial law the parties have the right to refrain from submitting the litigation to arbitral judgment until after the local tribunals have definitely failed. In every case each party names an arbiter and both will agree upon the selection of the third, and in case of disagreement they shall appeal to a third power; as a last resort they shall appeal to the Queen of the Netherlands or her successors. Every controversy which arises with respect to the interpretation or execution of the sentence will be submitted to the judgment of the tribunal or of the arbiter who has pronounced the decision. The convention shall remain in force for a period of 10 years; and it is intended to be renewed for periods of like duration if not denounced 6 months before the expiration of any period, and so on indefinitely.

On September 10, 1918, the French Government denounced the commercial and maritime reciprocal CONVENTION agreed to by Ecuador and France on May 30, 1898. The French Republic took this step owing to the fact that it had decided upon denouncing generally the commercial treaties and other agreements which constitute the statute law of her economic relations with the allied and neutral nations. According to the note of denunciation, France intends that after September 10, 1919, the date of the expiration of the treaty, its operation shall be extended for three months and may then be renewed indefinitely, a provision which has been agreed to by the Government of Ecuador.

HONDURAS.

On May 4, 1918, a treaty concerning the interchange of POSTAL MONEY ORDERS was signed in San Salvador between the Republics of Honduras and Salvador. Orders will be made on the basis of United States gold according to the rate of exchange for the day, and the maximum that may be drawn on one order is \$40. The treaty went into effect July 1, 1918.

URUGUAY.

On December 16, 1918, the ratification of the obligatory **GENERAL ARBITRATION TREATY** was effected between Uruguay and Italy as projected August 19, 1914, as was also the additional protocol added October 1 of the same year.

VENEZUELA.

By official documents exchanged in Caracas January 8, 1919, the Governments of Colombia and Venezuela signed an agreement concerning **DIPLOMATIC MAILS**, by the terms of which mail sacks containing official correspondence for the Venezuelan legation in Bogota and for the Colombian legation in Caracas will be sent free of transportation charges and by the regular routes used by the post in both countries concerned.



BOLIVIA.

By a recent presidential decree the beds, strata, or seams of **SALINE DEPOSITS** are declared Government property, including nitrates, carbonates, and other inorganic material of similar properties in the Department of Cochabamba. The decree does not limit their use as established by custom and does not interfere with the industries at present engaged in their exploitation. The execution of the decree is left to the Minister of Industry.

COSTA RICA.

Beginning with its issue of December 7, 1918, *La Gaceta*, the official daily paper, will publish the **NEW PENAL CODE** of the Republic sanctioned by Congress the same month.

ECUADOR.

According to a presidential decree of December 11, 1918, the following rules in regard to **TELEGRAPHIC TARIFFS** hold good: Two cents a word will be charged on telegraphic messages, the origin and destination, hour of transmission, and address of the sender being sent free; half a cent per word will be paid for press notices transmitted within the Republic; 1 cent per word on telegrams for the press in Venezuela, Colombia, Peru, and Bolivia; 4 cents a word for telegrams in foreign languages and for rush messages, and 6 cents a word for those in code.

By a legislative decree of the 25th of October, 1918, the 3d of November of every year was declared a NATIONAL CIVIC HOLIDAY, in commemoration of the independence of a large part of the old Department of the Azuay.

MEXICO.

Seven States of Mexico have enacted laws concerning ACCIDENTS TO LABORERS, namely: Nuevo Leon, Sonora, Vera Cruz, Zacatecas, Hidalgo, Chiapas, and Yucatan. The law of Nuevo Leon dates from November 2, 1906, of Hidalgo from 1915, of Zacatecas from 1916, of Yucatan from 1917, and those of Sonora, Vera Cruz, and Chiapas from 1918. Among other benefits, the law of Nuevo Leon establishes the following: For death, the payment of the entire wage for 2 years, 18 months, 1 year, or 10 months, according to the amount of debt left by the deceased; for total incapacity, the payment of the entire wage for 2 years; for partial incapacity, either temporal or permanent, the payment of from 20 to 40 per cent of the wage for 2 years, 1 year, or 6 months. The law of the State of Hidalgo establishes in case of death the payment to the heirs of 50 per cent of the salary or wage for 3, 2, or 1 year, according to the debts the deceased may have contracted; in case of perpetual incapacity a sum equal to the salary or wage for 1 year and work of which the injured man is capable must be supplied. According to the law of Vera Cruz in case of death the sum of 1 or 2 years' wage must be paid to the heirs; in case of permanent incapacity an amount equal to the wage for 4 years or a life pension equal to half the wage earned by the laborer at the time of the accident must be supplied; in case of partial incapacity a sum equal to 2 years' wage or a life pension equal to a quarter of his wage is obligatory. The ruling in Yucatan is that in the first and second cases cited payment shall be made of a sum equal to the salary of 2 years; and in the third event labor must be provided for which the victim is capable or his full wage of 1 year be paid. The law of Chiapas concedes to laborers and their employers the right of agreeing upon the amount of the indemnities and the terms of payment. In Sonora the general manner of the payment of indemnities in case of deaths or total or partial incapacity is established as well as the penalty for minor accidents, such as the loss of a finger, in cases where the injury was the direct result of the work in which the victim was engaged or was caused by lack of proper precautions and safeguards on the part of the employer.

PANAMA.

By a law of December 11, 1918, the following changes in the JUDICIAL CODE were made: (1) The Federal attorney general and other agents of the public administration shall be subject to appoint-

ment and removal by the President; (2) the magistrates and judges may not be suspended from office except in cases and after formalities prescribed by national laws, or removed from office except by legal sentence; (3) the salaries of judges may not be withheld or decreased to a degree that would impair their functioning.

PERU.

A law of January 9, 1919, makes a number of changes in the PENAL CODE and in the code of penal procedure. Modifications have been made of article 278, the second part of article 53, and the last paragraph of article 95 of the penal code, and article 70 of the code of penal procedure. Furthermore, articles 284, 285, 288, and 298 of the penal code, and article 76 of the code of penal procedure have been repealed.

URUGUAY.

The NEW CONSTITUTION of Uruguay which went into effect on March 1, 1919, is in substitution of the constitution of September 10, 1829, in force with some amendment for 90 years.

Many of the provisions of the old constitution are preserved in the new, but there are some very notable changes.

The balance of power between the three branches of government, the legislative, the judicial, and the executive in the main remains about what it was in the old constitution, but there is a fuller and clearer demarcation of the limits of these powers, which unquestionably will have the effect of lessening friction between the three.

All power of legislation remains in the General Assembly, composed, as in the old constitution, of two bodies, a Chamber of Representatives and a Chamber of Senators, the former elected directly and the latter indirectly by the people. With the exception of impeachment proceedings, and bills to raise revenue which, as under the United States Constitution, must originate in the lower chamber, any legislation, may originate in either the Senate or the Chamber of Representatives. The General Assembly elects the members of the high court of justice and approves or rejects all treaties entered into by the executive power. As under the British form, legislation bills may be proposed in either chamber by the executive through members of the cabinet sitting and taking part in the legislative discussions. By a vote of one-third of either chamber cabinet ministers may be called in to answer such questions as may be propounded. During the recess of the General Assembly a permanent committee of two senators and five representatives elected by their respective chambers sits as representative of the assembly in all affairs to be transacted with the executive. This committee is responsible to the General Assembly and may in case of urgency convoke the assembly in ordinary or extraordinary session. Article 176 of the new constitution

provides: "It shall be within the exclusive jurisdiction of the General Assembly to interpret or explain the present constitution." Students of the United States Constitution will recognize in this article of the Uruguayan constitution something that has no counterpart in their own. Plenary power to interpret the United States Constitution is nowhere conferred upon the executive, the legislative, or the judicial branches of the United States Government. But in Uruguay the written constitution conforms to the British theory, applied to an unwritten constitution, that the power to interpret rests with the legislature.

The judicial power in Uruguay rests with the high court of justice and subordinate courts of appeal and original jurisdiction. The high court is given exclusive jurisdiction in judging all violations of the constitution. This it will be observed is altogether a different function from that of interpreting the constitution, although in the United States the two functions in modern practice are exercised together or even without distinction.

The high court has also original jurisdiction in offenses against the law of nations and in admiralty; in questions arising under treaties or negotiations with foreign Governments, and also in matters affecting foreign diplomats and diplomatic agents.

The most notable change made in the new constitution is in respect to the executive power. It has been repeatedly asserted in the United States that Uruguay has adopted the commission form of government, and this has been taken to mean a form similar to or identical with the commissions recently established for the government of some of the western cities and towns, or that longer existing for the government of the District of Columbia. The idea in these is a joining of legislative and executive powers in one body, a commission, which in the case of municipalities becomes mayor, board of aldermen and head of the police department, tax department, and all other municipal agencies. This form, which more or less resembles the government of an industrial corporation through a board of directors, might be extended to State or national units, and the notion is current in the United States that Uruguay has so extended it to embrace its own National Government. Nothing of the kind is true. The balance in Uruguay between legislature, executive, and judicial remains as it always was, with the basis of this balance more clearly differentiated than ever before. Not only is the whole Government of Uruguay not put into commission, but a single branch, the executive, is only in part by commission.

The executive is divided into two branches, or, as the new constitution puts it (article 70): "The executive power is delegated to the President of the Republic and to the National Commission of Administration." In the old constitution it was (article 72): "The execu-

tive power of the nation shall be exercised by one single person under the title of President of the oriental Republic of Uruguay." Under the old constitution the President was elected by the General Assembly and under the new constitution is elected directly by popular vote.

The splitting of the executive power into two parts, of which the one part is intrusted to an administrative commission, is all there is of commission form of government under the new Uruguayan constitution.

The powers of the President are comprehended under 24 heads, the more notable of which may be summarized as follows: To represent the State within and without the country; to preserve order at home and abroad; to exercise supreme command of the army and navy—the exercise of command in person, however, is only with the consent of a two-thirds vote of the General Assembly; to appoint and to dismiss the ministers of foreign relations, of war and navy, and of the interior together with the attachés of these ministries; to inform the legislative power as to the state of the country and the measures and reforms deemed necessary; to make concrete proposals for new laws or for modifications of old laws; to call the legislative power in extraordinary session; to appoint the personnel of the consular and diplomatic service—in the case of chiefs of diplomatic missions the consent of the Senate or of the permanent committee when the Senate is in recess is necessary; to receive diplomatic agents and to grant consular exequaturs; to declare war after resolution by the General Assembly; to take measures for public security against interior or exterior attack; to present an annual budget to the administrative commission and to conclude treaties, but prior to subscribing the same the advice of the commission must be taken and the treaties must be submitted for ratification to the legislative power.

The national commission of administration is composed of nine members elected for six years directly by popular vote. As in the Senate of the United States, one-third of the membership of the commission is elected each two years. As in the British system, minority representation is provided for by plurality voting (*doble voto*).

The powers of the administrative commission are all administrative powers not expressly reserved to the President or some other branch of the Government, especially such as relate to public instruction, public works, labor, industries and finance, public charitable and health service. The commission renders a particularized account to the General Assembly of the collection and expenditure of revenues and prepares and submits the final general annual budget. It provides regulations for holding elections and in general exercises

supervision over all matters of administration not reserved to the President.

A striking provision of the new constitution is that which prohibits the President of the Republic from leaving the national territory for more than 48 hours without the consent of the legislative power, and a like prohibition applicable to members of the administrative commission, without consent of a two-thirds vote of the full commission.

PUBLIC INSTRUCTION AND EDUCATION

ARGENTINE REPUBLIC.

On December 16, 1918, the RAFAEL HERRERA VEGAS SCHOOL BUILDING, which was constructed in Buenos Aires with funds given the National Council of Education by the children of the lamented educator after whom the school is named, was dedicated to public use.

During the fiscal year 1918 secondary, normal, and special INSTRUCTION in different branches was given in 36 national colleges, 1 lyceum for girls, 77 normal schools, 7 schools of commerce, 4 industrial schools, 3 schools of arts and crafts, 1 grammar-school teachers' institute, 1 school of modern languages, 1 high school of physics, 1 school of industrial chemistry, 1 national school of fine arts, 16 professional schools for women, 2 deaf and dumb institutes, and 1 institute for the blind, or a total of 152. These schools had 67,631 matriculates and an average attendance of 61,133. Each student represented an annual expense of 293.79 pesos. Of these students 94.49 per cent were Argentines, and 5.51 per cent foreigners. The instruction was given by 5,169 teachers, of which 56.64 per cent were males and 43.36 per cent females. Of the teachers 87.79 per cent were Argentines and 12.21 per cent foreigners. There were also 51 private schools, representing a registration of 5,110 students, operating in cooperation with the official schools.

The executive power has been authorized by a law of August 23, 1918, to cooperate with the government of the Provinces in taking a census of provincial and municipal teachers, their classification, pay, length of service, etc.

BOLIVIA.

According to recent reports, public instruction has widened in scope to a considerable extent in Bolivia in recent years owing to the

efforts of the Government and the measures adopted, such as establishment of rural normal schools which train all teachers employed in primary schools in cities. The number of DISTRICT SCHOOLS has increased considerably in the past 18 years, from 84 in 1900 to 612 in 1914. In 1915 the number fell to 540 and in 1916 to 430, but in 1918 it again rose to 450, the temporary decrease being due entirely to the economic crisis through which the country was passing. In 1918 the total attendance at the schools was 58,400, of which 2,559 were students of secondary schools, 331 of normal schools, and 1,318 of special courses. The Government spends 3,020,672 bolivianos annually in public instruction.

Sr. Norberto Galdo, Director of the National Institute of Commerce of La Paz, who was named by the Government as delegate to the First Congress of Economic Expansion and Commercial Studies held in Montevideo January 29, has been appointed by the Minister of Public Instruction to make a detailed study of the organization and progress effected in the preparation of commercial teachers in the cities of Santiago and Buenos Aires.

By an agreement reached between the president of the municipal council of La Paz and the agent of the electric railway company of that city, henceforward the company will grant a reduction of 50 per cent on SCHOOL CHILDREN'S FARES.

By a law passed by the National Congress January 7, 1919, credit toward entrance into any of the colleges or higher schools of the Republic is given for all studies in the MILITARY COLLEGE, after such students have complied with the governmental requirements. Second lieutenants graduated from the college will receive the degree equivalent to the bachelorate of universities. Cadets when they become alumni must serve at least six months in the army after the proper preparation in the college, and those who receive tuition free are bound to serve two years in the active army, at the expiration of which period they may retire as reserve officers.

A group of young workmen of Oruro have organized a STUDENT CENTER to collect information and data desired by them.

The school term for 1919 was begun January 6 for both higher and lower INSTITUTIONS OF LEARNING.

COLOMBIA.

The governor of the Department of Bolivar has issued a decree by which students in official "colegios" of the Department are obliged to take part in the RECREATIONAL GAMES held in the schools.

COSTA RICA.

By an executive decree of November 18, 1918, the President of the Republic reestablished the LECTURE COURSES given in vacations in the capitals of Provinces and other cities of the Republic

which have libraries and other advantages necessary where 25 teachers or more may meet to hear the 160 lessons which make up the courses. The work is of three grades; the first will be for teachers holding certificates and for the aspirants who have had two years of creditable experience, and the other two for teachers of similar experience and holders of the higher certificate.

CUBA.

The first annual NORMAL SCHOOL INSTITUTE of Cuba was held in Habana December 27-31, inclusive. The institute was the result of the efforts of Dr. Alfredo Rodríguez Moreno.

GUATEMALA.

On February 9 the President of the Republic formally opened the new classrooms and offices of the MILITARY ACADEMY of Guatemala with impressive ceremonies.

HONDURAS.

The SCHOOL CENSUS of 1918 showed a total of 93,004 boys and girls of school age, of whom 33,127 were registered as actual students.

In 1918, 965 SCHOOLS were in operation with a teaching staff of 1,197, of whom 461 held degrees and 72 had certificates of proficiency.

In 1918 various institutions of higher learning conferred the following ACADEMIC TITLES: Bachelors, 15; commercial experts, 15; bookkeepers, 4; teachers, 64. During the same year 3 lawyers were admitted to the bar as specialists in political science; 6 physicians and surgeons, 3 pharmacists, and 2 dentists licensed.

The EXPENDITURES for elementary instruction in 1917-18 were 633,041 pesos, of which sum 110,159 pesos were supplied by the National Government and 522,882 by municipalities.

MEXICO.

With a view to fostering interest in aviation a civilian SCHOOL OF AVIATION has been established in the capital, to which every person who wishes to become an aviator will be admitted, without being subject to military discipline, upon the payment of a monthly fee and the cost of any damage to apparatus used.

The National School of Agriculture, established by a recent disposition of the President, makes it possible for a student to take a complete course in SCIENTIFIC AGRONOMY in Mexico City in six years, receiving at the successful completion of the work set for this period the title granted by the Secretary of Agriculture and Commerce.

On the morning of February 7, 1919, the formal opening of the UNIVERSITY TERM of the colleges of the National University took place.

The NAVAL SCHOOL of Vera Cruz, which has for some time been undergoing reorganization, was officially reopened by the governor of the State on February 5. The student body which has already enrolled is most enthusiastic.

PANAMA.

The President has been authorized by the National Assembly to organize a full-year course of FREE PUBLIC LECTURES through the Secretary of Public Instruction, these lectures to become a permanent feature in the educational system. Lectures are to be given by professors, specialists, or other persons familiar with the phase of the subject they themselves choose to discuss, and shall be held in public schools, institutions of higher learning, colleges, universities, theaters, parks, or preferably in buildings most convenient for large public assemblies.

On January 31, 1919, the LECTURE COURSE TERM for the school year of 1918-19 closed in the institutions of higher or professional instruction.

PERU.

A recent executive decree provides for the establishment of a MILITARY AVIATION SCHOOL using for this purpose as a basis the equipment and personnel now available in the Republic.

According to the report of the rector of the UNIVERSITY OF LIMA, in 1918 that institution had 1,471 students in the following departments: Theology, 50; law, 227; medicine, 567; political science and government, 184; science, 208, and letters, 235. During the past year the university conferred 65 bachelor and 50 doctor degrees.

The report gives a detailed account of the SCIENTIFIC EXPOSITION held by the Department of Junin and Huanuco, under the direction of Dr. Carlos Rospigliosi y Vigil, and with the cooperation of the Government. It also reports upon the formation of a historical museum of the university. This museum is to be enlarged by the addition of archeologic and historical collections.

SALVADOR.

Sr. Manuel Sánchez Peralta, a lieutenant of Salvador, was graduated in the middle of January from the School of Aviation of Mexico as a PILOT AVIATOR. He has the honor of being the first Salvadorean to receive the coveted title.

The formal opening of courses of the NATIONAL UNIVERSITY took place the morning of January 19 in the presence of the President

of the Republic and many high governmental officials. Later the title of honorary professor of the faculty of medicine was bestowed upon Dr. William C. Gorgas, the American scientist and physician.

URUGUAY.

A group of engineering students of Montevideo has undertaken the organization of a PEACE CONGRESS to which the American Universities will be invited. They propose the naming of a committee whose duties shall be to draw up a program and solicit the cooperation of public officials and other prominent men.



ARGENTINE REPUBLIC.

The Argentine Government has appointed a commission of engineers to study the proposed construction of a GREAT BRIDGE over the Parana River, ferryboats being used at the present time in crossing this stream. The bridge planned will probably be the longest in the world, inasmuch as it will have a length of from 24 to 30 kilometers and will not cost less than 30,000,000 pesos. The construction and use of this bridge will reduce by several hours the time of the railway journey from Buenos Aires to Asuncion, Paraguay.

On December 8 last Carlos Arias delivered to the municipality of Alberti the ASYLUM HOSPITAL of our Lady of Mercy, erected and fitted up in accordance with the provisions of a will made by his brother, Gen. José Inocencio Arias. The hospital possesses all the hygienic features required for this kind of an institution, and is adequately and modernly equipped.

Dr. Estanislao S. Zeballos is actively participating in organizing in Buenos Aires a branch of the British Association of International Law. It is believed that other countries will follow the example of the Argentine Republic and that these branches will be established in all of the Latin-American countries, and that they will greatly facilitate the realization of a plan to call a congress to meet in one of the South American capitals to consider the reconstruction of INTERNATIONAL LAW. The celebrated institute of international law which was founded in Europe by Rolin-Jacquemyns having been disorganized, the British association has taken the initiative for the holding in some neutral country of an international congress to consider this subject.

The number of licenses issued in Buenos Aires authorizing **VEHICLES** to use the streets of the city is 34,702.

During the first nine months of 1918 there were slaughtered in the city of Buenos Aires for the use of the national capital 476,995 **BEEVES**, 739,180 sheep, 111,592 hogs, and 3,193 horses. Estimating the average weight of the beeves at 300 kilos, 180 of which are available for food, the consumption of beef during the months referred to was 85,859,100 kilos, or at the rate of 52 kilos per inhabitant. During the first six months of 1918 the markets of Buenos Aires received a supply of 7,526,200 kilos of fish, which would indicate that the total supply during the year was not less than 13,000,000 kilos. In 1918 there were 666 bakeries in operation in Buenos Aires, the output of which was about 177,575,200 kilos of bread. The milk consumed in Buenos Aires annually is estimated at about 180,000,000 liters. The annual consumption of vegetables is estimated at 220,000,000 kilos and of fruits about 150,000,000 kilos.

According to information from the municipal statistical bureau, the **POPULATION** of Cordoba on November 30, 1918, was 156,100.

The National Government has reorganized the **GEOGRAPHIC MILITARY INSTITUTE**, and has arranged for it to make a military map of the country and to continue its geodetic work.

BOLIVIA.

By a law of the National Congress the President was authorized to lease the **TIAHUANACU PALACE** in which to establish the headquarters of the national museum and the mineralogical museum when reorganized as one institution.

Sr. Francisco Barriga has recently given a beautiful building in the city of La Paz to the Sisters of St. Vincent to be used as an **ASYLUM FOR THE POOR**, under the auspices of the order.

In a session held by the members of the **COLLEGE OF LAW** of La Paz the middle of January the following executive officers were elected: President, Dr. Claudio Q. Barrios; first vice president, Dr. Francisco Iraizós; second vice president, Dr. Manuel Alarcón M; secretaries, Dr. Eduardo Rodríguez and Dr. Roberto Zapata; treasurer, Dr. Julio J. Eyzaguirre.

In view of the fact that Spanish steamship service with Buenos Aires is more frequent than with Panama, the postal officials of Spain have ordered that **CORRESPONDENCE TO BOLIVIA**, as well as correspondence from Bolivia to Spain, shall be sent via Argentina to avoid unnecessary delays.

On January 1, 1919, the installations of **MUNICIPAL COUNCILS** in all cities of the Republic were held with impressive ceremonies.

By a recent presidential decree the territory of the Republic was divided into **MILITARY DISTRICTS**, everyone presided over by a

brigadier general or colonel; the districts are made up in the following manner: (1) Northern district, consisting of the department of La Paz; (2) central district, the departments of Oruro and Cochabamba; and (3) southern district, the departments of Potosi and Chuquisaca. The departments of Tarija, Santa Cruz, El Beni, and the national Territory of Colonias will constitute three military commands, headquarters of the first being at La Paz, of the second in Oruro, and of the third in Potosi. The decree makes further stipulations in regard to the commands of the frontiers.

From the middle of January direct **WIRELESS SERVICE** between the radio stations of Viacha and Riberalta has been resumed, the rates approved by the minister of Government being in vogue.

By laws of the National Congress the President is authorized to begin the laying of the **SEWERAGE SYSTEMS** of the cities of Cochabamba and La Paz, and with this object to obtain two loans of 1,000,000 bolivianos for Cochabamba and 2,000,000 bolivianos for La Paz.

BRAZIL.

Congress has authorized the President of the Republic to raise the diplomatic representation of Brazil to the Government of Great Great Britain to an **EMBASSY**.

The **PORTUGUESE HOSPITAL** at Recife, one of the oldest eleemosynary institutions in Brazil, has provided, among other improvements, two operating halls, a hall for the administration of chloroform, a wardrobe room for physicians, a microscopic and bacteriologic laboratory, a hall for surgical instruments, a dark room, and two bath halls for fever patients with high temperatures.

CHILE.

On January 12 the solemn **CONSECRATION** of the new archbishop of Santiago, Illmo. Sr. Crescente Errázuriz, took place. The cabinet ministers, members of the diplomatic corps, high public officials, and many members of social fraternities were present to witness the ceremony.

By a decree of the Minister of Foreign Relations the **CONSULATE OF CHILE** in Buenos Aires is recognized as of first rank.

The Government has appointed Sr. Enrique Bravo Miranda to study in the United States the organization, management, etc., of **RAILROAD SHOPS**, with a view of establishing the same system in Chile.

The Chilean citizen, Sr. Víctor Pretot Freire, of Paris, has recently made a gift of \$10,000 to the Navy League of Chile to assist in the founding of a **SEAMEN'S HOME**, one of the objects of the organization.

On January 1 the first Chilean AIRSHIP MAIL SERVICE route was established between Santiago and Valparaiso.

COLOMBIA.

An interesting PREHISTORIC FOSSIL was recently discovered on the Casanare plain. The specimen, measuring 36 meters in length, is to be placed in the national museum at Bogota.

The National Government has appointed a committee to organize the festivities by which the FIRST CENTENARY of the Battle of Boyaca will be celebrated in the capital of the Republic August 7 of the present year.

According to the report of the general board of statistics of Colombia, the POPULATION OF BOGOTA, which in 1912 numbered 121,251 reached 137,890 in 1918, having increased by 16,639 in the past six years.

TELEPHONE SERVICE has been established between the cities of Bucaramanga and San Gil in the Department of Santander.

During the middle of January the NEW MINISTER plenipotentiary of Mexico to Colombia, Sr. Gersain Ugarte, and the Secretary of the Legation, Sr. José Juan Tablada, arrived in Bogota.

Dr. Julio Betancourt, ex-minister of Colombia in Washington, has been appointed FEDERAL ATTORNEY (Abogado de la República) by the President, with the character of plenipotentiary, to serve wherever the Government may station him.

The Spanish-American Commercial Bank (Banco Comercial Hispano-Americano) of Medellin has bought the building occupied by the telegraph company on the Plaza de Berrio on the site of which it will erect a three-story BUILDING of reinforced concrete in which to install its offices.

The VITAL STATISTICS of the city of Medellin give a total of 1,488 births and 1,439 deaths during the year 1918.

The director of Section III of the Ministry of Foreign Relations, Sr. Alberto Sánchez, has been appointed to edit a BOOK OF INFORMATION and propaganda concerning Colombia.

CUBA.

During the middle of December, 1918, the President of the Republic officially received the envoy extraordinary and MINISTER plenipotentiary of Brazil, Dr. Anibal Velloso Rebello.

DOMINICAN REPUBLIC.

The POSTAL AND TELEGRAPH SYSTEMS of the Republic, hitherto under separate management, were consolidated January 1 of this year.

A NEW NEWSPAPER of general interest has been founded in the city of Moca under the direction of Sr. Porfirio C. Morales and Sr. Diógenes del Orbe.

Two steel towers 150 feet in height have been erected in the city of Santo Domingo for the RADIO STATION there established. These towers, supplemented with wooden masts, have a total height of 225 feet.

The well-known writer, Dr. José Ramón López, is about to publish a book called UN MANUAL DE LA REPUBLICA DOMINICANA which will contain much valuable data concerning the Republic, including detailed descriptions of Provinces, communities, and rural sections.

ECUADOR.

Desiring to contribute as fully as possible to the celebration of the first centenary of the independence of Guayaquil, the Equadorian Press Association has decided to publish a SPECIAL VOLUME with the title "Free America" ("América Libre"), which shall set forth the progress accomplished by the Iberian section of the American Continent in its first century of independence.

On the program to be carried out in celebrating the centenary of the independence of Guayaquil, which will take place October 9, are the following features: Completion of the new waterworks; finishing the paving of various sections of the city; contest in the writing of the best history of Guayaquil from its founding to the present date (the author of which will receive a prize of 500 condors, a gold medal, and the publication of the work); unveiling of the statue of Columbus on October 9, 1920; awarding of a prize to the best hotel in the city erected according to hygienic principles and municipal ordinances with a view of accommodating visitors to Guayaquil (the prize to consist of a sum of gold equal to 5 per cent of the cost of its erection); issue of postage stamps commemorating the centenary; erection of a monument to Abdón Calderón, the hero of Pichincha; construction of an arcade four blocks long and three stories high; and the organization and holding within that building of an international exposition of manufactures.

GUATEMALA.

Whereas Guatemala is enjoying a period of calm and tranquillity in which she may devote her energies to the sacred duties of citizenship and to the task of reconstruction following the seismic disturbances occurring since December 25, 1917, the President by a decree recently promulgated has proclaimed December 25 as a DAY OF THANKSGIVING.

By a recent presidential decree a SANITATION INSPECTION COMMITTEE has been established to work under the direction of the national sanitary commission which will name the members of the committee. The inspectors will number 25 policemen and a chief, who will be under orders of the national commission.

HAITI.

A recent report of the sanitary engineer of Haiti, Dr. M. T. McLean, on the organization of the PUBLIC HEALTH SERVICE of that country, shows that in August, 1915, an earnest propaganda was started by naval medical officers, connected with the public health service, with the object of improving the health conditions of the Republic. This movement was continued throughout 1915, 1916, and 1917, and in October of the latter year an organization was formed which gave the chief sanitary engineer of Haiti full control of the sanitary affairs of the nation, including street cleaning. In November, 1917, this organization also took over the hospital and quarantine service of the country.

The work of the organization was considerably hampered by a shortage of funds available from the Haitian treasury. This was partially offset, however, by the hearty and efficient cooperation of the Gendarmerie d'Haiti which induced a number of physicians and hospital corps men to serve as sanitary agents in the Provinces, which were divided into a central, a southern, and a northern district, with headquarters, respectively, at Port au Prince, Cape Haitien, and Aux Cayes. The entire work is carried on through the sanitation, hospital, and quarantine divisions.

Immediately after these plans were perfected the central division at Port au Prince made use of improved methods in handling the sanitary work of the national capital, where there are at present employed in this service 5 motor trucks, 30 mule dump carts, and 60 hand carts. Incinerators were built and the rubbish of Port au Prince collected and disposed of in a scientific manner. The facilities, however, for quickly, and properly handling this work are still inadequate.

The sanitary conditions of the northern and southern provinces have also greatly improved, and especially is this noticeable in the towns. The French Sisters de la Sagesse and St. Rose of Lima, who have been in charge of hospital and poorhouse work throughout the country, have rendered the health department invaluable services. These noble workers, imbued with a spirit of loyalty, devotion, perseverance, and patience, have performed the arduous and humanitarian work which came within the scope of their activities in a manner that is worthy of the highest praise.

The hospitals at Port au Prince, Cape Haitien, and Aux Cayes are in charge of experienced physicians. The City General Hospital in the national capital, now a charitable institution, is the outgrowth of the old Military Hospital and the Hospital of St. Vincent de Paul. It has 8 wards with an average of 40 beds each. The location is most desirable, the grounds are spacious, the natural drainage good, and the view exceedingly beautiful. In addition to the wards there have been erected on the grounds a sisters' home, a home for nurses, offices, and other necessary buildings. The hospital also maintains a dental department, and in October, 1918, established a training school for native women nurses.

The following statistics show the work done at the General Hospital from December, 1917, to November, 1918, inclusive: Admissions, 2,349; discharges, 2,383; births, 64; deaths, 309; average daily census of patients, 292; average daily out-patients, 40; major operations, 64, and numerous minor operations.

With the reorganization of the financial system of Haiti the new public health service has been included as a subdivision of the Department of the Interior. Its operation during the first year was most satisfactory. A public health law has been drafted and submitted to the Conseil d'Etat for approval. It is believed that the law as prepared will be approved and become operative in the near future.

The report recommends a general vaccination of the entire population of the country as soon as funds are available for this purpose, as well as a strict segregation of persons afflicted with leprosy. As the commerce of Haiti is rapidly increasing, it is hoped that during the next fiscal year such an increase of funds will be made available as will enable the sanitary authorities to properly carry on in all of its branches the sanitary work of the Republic.

HONDURAS.

The following statistics concerning the ARMY on July 31, 1918, are official: Active army, 46,106; reserve army, 21,505, or total 77,611 men. On July 31, 1917, there were 62,229 members of the army, or 5,312 less than in 1918.

At the session of January 6 of the present year Congress made the following nominations for VICE PRESIDENTS (Designados): Sr. Dr. Don Francisco J. Mejía, Dr. Don Nazario Soriano, and Gen. Don Leopoldo Córdova. Owing to the death of Dr. Mejía on the 31st of the same month, Congress appointed Dr. Soriano as first vice-president, or designate, and Dr. Francisco Bográn as second.

MEXICO.

On the 1st of May a WORKMEN'S CONGRESS will meet in the City of Mexico to study the problems of the working class and the

laws which at present affect them. It will also lay out the work of the delegates to represent Mexico at the Pan American Laborers' Congress which will meet in New York on the 1st of the coming July.

Since the 1st of February numbers of the MORMON COLONIES have been reestablished in the State of Chihuahua, where they previously had founded the colonies Dublan and Juarez, removing in 1913 to the United States. They have again taken up their residence in Chihuahua, bringing with them large supplies of agricultural machinery with which to carry on the ranch work in which they have made a remarkable record.

NICARAGUA.

Sr. Dr. Don Manuel Esquerra, MINISTER PLENIPOTENTIARY from Colombia to Nicaragua, presented to the President his credentials as minister on January 30, 1919. Greetings and expressions of friendship were exchanged at the reception of the new diplomatic representative.

By legislation of December 21, 1918, the hymn in use as the NATIONAL ANTHEM was formally declared such and permission granted the President to change the wording as he may deem fit and to standardize the form of rendering honor to the hymn and the flag.

On December 23, 1918, the municipality of Granada and neighboring cities signed a contract for the establishment of an ELECTRIC LIGHT SYSTEM, whereby the other towns agree to contribute \$80,000 toward the installation of a plant equipped to meet the public and private needs of the circuit.

A large estate in Granada has been purchased by Dr. Rodolfo Espinosa for the installation of a MODERN SANITARIUM which will employ nurses from the United States. Accommodation for 100 patients will be prepared.

Sr. Don Adolfo Cárdenas has been named SECRETARY OF THE LEGATION in Washington by a presidential appointment of December 9.

On January 1 the following new judges of the supreme court were sworn in: Sres. Santos Flores L., Estanislao Vela, Carlos Rosales, Emilio Alvarez, Juan Manuel Siero, and Daniel Gutiérrez Navas.

PANAMA.

According to information received from the Secretary of Foreign Relations, the President has appointed Dr. Hermodio Arias, Dr. Evenor Hazera, and Dr. Gregorio Miró members ad honorem of the PAN AMERICAN COMMISSION created by decree No. 41 of 1908

to bring about the approval of the resolutions adopted by the Pan American conferences and to collect data for the Pan American Union in Washington. The appointment was made to fill the vacancies caused by the deaths of Mr. Demetrio H. Brid and Mr. Francisco V. de la Espriella and the resignation of Gen. Don Santiago de la Guardia.

In Colon a BUREAU OF SAFETY has been created which shall administer safety measures within the city, guard property or materials that might cause fire, explosions, or other catastrophes, and exercise police authority.

By a recent law of the National Assembly, the 14th of July, the day celebrated by France in commemoration of her revolution, and the 4th of July, anniversary of the independence of the United States of America, were set aside as NATIONAL HOLIDAYS.

Mr. Osvaldo López has been named FEDERAL ATTORNEY GENERAL for the remainder of the constitutional term.

The National Assembly has granted a COPYRIGHT to the author of the biography of Dr. Justo Arosemena; the complete works by the author are ordered to be printed at the expense of the Federal treasury and are to be sold at cost; 2,000 balboas have been appropriated as the nation's share toward the erection of a statue of Dr. Arosemena. The biography in question won a prize in the contest conducted by the Secretary of Public Instruction.

Permission has been granted by the President for the organization of a company to be called the ITSMEÑA WOOD COMPANY in the city of Colon.

The NATIONAL POLICE FORCE of the Republic is composed of the following personnel: One inspector general, 2 assistant inspectors, 10 captains, 16 lieutenants, 40 second lieutenants, and 750 policemen.

PERU.

Congress has enacted a law appropriating Lp. 2,000 for the erection of a MONUMENT to Sebastian Lorente in University Square, city of Lima.

In accordance with a law of the National Congress providing for the establishment of a NATIONAL ARCHIVE in Lima, the President has appointed Dr. Horacio H. Urteaga, a learned university professor and Peruvian historian, director of the same.

An executive decree of January 17 last postpones the taking of the GENERAL CENSUS of the Republic provided for under a decree of June 7, 1918.

With the object of stimulating professional work and in order to encourage closer relations between physicians of the hospitals in Lima, an association of HOSPITAL DOCTORS has been formed in

the national capital. The officers of this association are: Dr. Ernesto Odriozola, president; Dr. Julian Arce, vice president; and Drs. Carlos A. Bambarén and César A. Zevallos, secretaries.

In February last Miss María Wiese, a Peruvian writer, commenced the publication of a new weekly *ILLUSTRATED REVIEW* entitled "Familia" (Family).

Under date of January 27 last the President of the Republic issued a decree for the *ELECTION* of President and Vice President for the next constitutional period which, according to law 2128, begins on August 18 next, and for the election of senators and deputies whose term of office expires in July next.

The *DEMOGRAPHIC STATISTICS* of Lima during the five years from 1914 to 1918, inclusive, show a total of 27,664 births and 26,160 deaths. In 1918 there were 6,271 births and 6,575 deaths. The number of marriages during the five-year period referred to were 4,224, of which 1,012 were in 1918. Tuberculosis was the cause of the greatest number of deaths.

Construction work has been actively renewed on the San Martín *PLAZA* in the city of Lima, and on the extension of the Nicolas de Pierrola Avenue.

The President has made the following diplomatic and consular *APPOINTMENTS*: Dr. Victor M. Maúrtua, minister to Holland; Dr. Jorge Polar, minister to Cuba and Venezuela; R. McLean, consul general to Ecuador; Eduardo Herrera, consul general in Lisbon; and Dr. Cesar Antonio Ugarte, secretary of the legation in Holland.

SALVADOR.

Sr. Jorge Meléndez and Sr. A. Quñones Molina were elected President and Vice President of the Republic for the constitutional period from March 1, 1919, to March 1, 1923, at the *ELECTIONS* held throughout the Republic on January 12, 13, and 14. According to press reports, the total number of votes cast in all the cities of the country was 185,492 for President and 89,582 for Vice President.

By a presidential decree of January 23 of the present year the sum of 5,000 francs is authorized to be remitted by cable immediately to the order of Don Miguel Duénas, the Salvadorean minister to France, under article 1 of the budget. The amount is contributed by the Government of Salvador for the construction of a monument which the "Latin Fraternal League" ("Liga de Fraternidad Intelectual Latina"), of which the French literateur, Paul Adams, is president, will erect in Paris in honor of the noted Central American poet. Rubén Darío.

Within a short time a *MILITARY-CIVIC RECORD* will be prepared by an officer of the army in collaboration with eminent men of

letters of the country, which will contain interesting historical data concerning the Republic, biographies of prominent citizens, presidents, soldiers, artists, literati, and tradesmen who have figured in the history of the nation.

On January 28 the President issued a decree by which the SUPERIOR HEALTH COUNCIL is reorganized and divided into five sections: (1) Bacteriology, vaccination, and preventive inoculations; (2) sanitation of ports and frontiers; (3) departmental hygiene; (4) engineering, medical, and supervised sanitation; and (5) consulting and legal measures for the execution of the laws enacted. The council will be composed of Dr. Juan C. Segovia, the president, and Dr. Rafael V. Castro, Dr. Salvador Calderon, Dr. Pedro S. Fonseca, and Dr. Leonilo Montalvo.

URUGUAY.

Since the 1st of March, the date of the inauguration of Dr. Baltasar Brum as President, the following CABINET has been appointed: Minister of Foreign Relations, Dr. Juan Antonio Buero; Minister of War and Navy, Gen. Guillermo Ruprecht; Minister of the Interior, Dr. Javier Mendivil; Minister of the Treasury, Dr. Ricardo Vecino; Minister of Public Instruction, Dr. Rodolfo Mezzera; Minister of Industries, Dr. Luis C. Caviglia; and Minister of Public Works, Ing. Humberto Pittamiglio. During the absence of Dr. Buero, Dr. Daniel Muñoz will act as Minister of Foreign Relations.

The national COUNCIL OF ADMINISTRATION recently elected is as follows: Dr. Feliciano Viera, president; Dr. Alfredo Vázquez Acevedo, Dr. Ricardo J. Arico, Dr. Domingo Arena, Don Pedro Cosio, Dr. Carlos A. Buero, Dr. Francisco Soca, Don Santiago Ruvas, and Dr. Martín C. Martínez.

During the past year in Montevideo the first ROTARY CLUB of South America was organized and is now affiliated with the International Association of Rotary Clubs of Chicago. Foreign members of the association when visiting Montevideo may communicate with Herbert P. Coates, 469 Calle Sarandí.

During the middle of December a handsome MONUMENT was unveiled to José Pedro Varela, the renowned reformer of the system of public instruction in Uruguay. The statue is the work of the well-known Spanish sculptor, Miguel Blay.

The Council of Post, Telegraphs, and Telephones has authorized the Western Electric Co. to make the necessary technical and financial estimates with a view to establishing an underground TELEPHONE SYSTEM in the Department of Montevideo.

VENEZUELA.

By presidential decrees of January 24 of this year the construction of an ISOLATION HOSPITAL in accordance with modern scientific principles was authorized in the vicinity of Caracas, as well as the erection of two quarantine bases within the boundaries of the ports of La Guaira and Puerto Cabello. Both buildings must meet the requirements of the departments in which they are erected as well as the general rules laid down for such establishments.

A MODERN HOTEL is to be erected on the site now occupied by the San Pablo Market in Caracas in the center of a handsome park. The architecture is to be similar to that of some of the most famous hotel buildings in existence, and the Government, which is directing its construction, has resolved to make it an addition of beauty, utility, and convenience to the city.

The Government has appointed Dr. G. T. Villegas Pulido to act as FEDERAL ATTORNEY GENERAL in place of Dr. Alejandro Urbaneja, resigned.

In honor of SIMÓN BOLÍVAR, the liberator, the municipal council of Lisbon, Portugal, has decided to confer the name of Bolívar upon the fourth street in Barrio da America of that city. The street runs parallel to the second street of the same district, called Washington Street. In this manner the names of two great American liberators, one from the Southern and the other from the Northern Continent, will be associated by a delicate suggestion.

On February 15, 1919, the first CENTENARY of the opening of the Second National Congress of Venezuela was celebrated, known historically as the Congress of Angostura. In commemoration of the event the Government is to publish a Spanish and an English edition of Bolívar's inaugural address to the assembly.

Dr. Esteban Gil Borges has been named MINISTER OF FOREIGN RELATIONS to replace Dr. Bernardino Mosquera, resigned. The new chancellor was counsellor of the Venezuelan legation in Washington from 1911 to 1914.

On January 25 of the present year the Government ordered the construction of a CREMATORY in Caracas to dispose of garbage and other refuse necessary for the sanitation of a city the size of Caracas.

A NEW STADIUM, to be used for public spectacles, was officially opened in Caracas on January 26. The building is of reinforced concrete, has a seating capacity for 12,000, and was built at a cost of 1,200,000 bolivars.

SPECIAL COMMISSIONS have been appointed to study questions relative to carrying out the terms of the treaty of arbitration entered into between Venezuela and Colombia on November 3, 1916, and to

report concerning certain claims against the Government submitted to their consideration. Dr. Pedro Itriago Chacín has been designated as adviser to the Minister of Foreign Relations.

By presidential decree the provision concerning VACCINATION, formulated by the office of the sanitation commission, in accordance with the power designated to it by the health Law of 1912, was accepted.

Dr. ALBERTO DIEZ DE MEDINA, Envoy Extraordinary and Minister Plenipotentiary of Bolivia to Venezuela, was received in formal public audience by the provisional President on February 3, 1919. The reception was also the occasion of the presentation of an oil portrait of Marshal Sucre, executed by the noted Venezuelan painter Arturo Michelena, to the new minister, in attestation of the friendship of Venezuela toward Bolivia.

As a feature of the celebration of the centenary of the Battle of Boyacá, the National Academy of History of Caracas will hold a LITERARY CONTEST in which all citizens of the American Republics will be invited to participate. The subject of the essays is to be "The Battle of Boyacá and its military and political significance." Two prizes will be offered, one a diploma and 4,000 bolivars, the other a diploma and 2,000 bolivars. Manuscripts to be submitted for the contest must be typed and sent to the secretary of the academy by July 2 of this year at the latest, in a sealed envelope and bearing only a distinguishing title. The name of the author and his address together with the special title should be sent in another sealed envelope.



BOOK NOTES

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- Impuesto a la renta su inoportunidad y peligros. (Encuesta preliminar.) Conferencia argentina del comercio, de la industria y de la producción. Buenos Aires. 29 p. 4°. (Estudio de problemas nacionales, No. 5.)
- Informe leído por el presidente Sr. Antonio León Lanusse en la asamblea general ordinaria de 27 diciembre de 1918. Liga de defensa comercial. Buenos Aires, Imp. E. Frigerio, 1918. 59 p. 4°.
- Land in the Argentine Republic. Pan American Union. Washington, 1919. 10 p. 8°.
- Lenguaje del Río de la Plata. Diccionario de las voces, modismos y refranes de uso corriente en las República Argentina, República Oriental del Uruguay y República del Paraguay con sus equivalencias en castellano según la décimatercia edición del diccionario de la lengua por la Academia Española. Obra que ha escrito Wáshington P. Bermúdez y . . . Sergio Wáshington Bermúdez. Entrega Nos. 1-6. Buenos Aires, Talleres gráf., L. J. Rosso y Cía., 212 p. 4°.
- Memoria de la cámara arbitral de cereales 1918, 20° ejercicio. Bolsa do comercio. Rosario, A. Caubarrére, 1918. 138 p. 8°.
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[Continued in April number.]

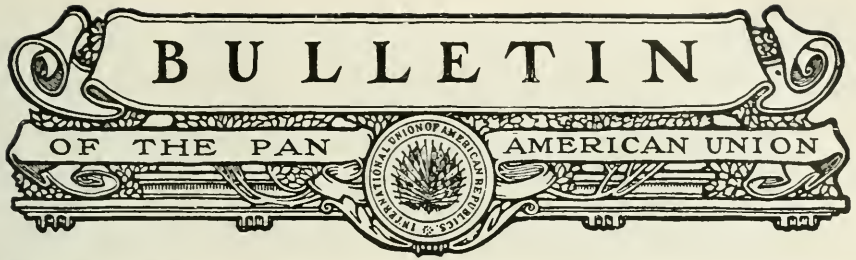




Courtesy of United States National Parks Service.

LONG'S PEAK, ROCKY MOUNTAIN NATIONAL PARK.

Long's Peak, 14,255 feet high, is the commanding feature of the park, a part of the very backbone of North America



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BOGOTA, THE ATHENS OF SOUTH AMERICA¹

THE name with which Licenciado don Gonzalo Jiménez de Quesada and his warring hosts christened the Andean plateau was Santa Fe. To that nobleman nothing seemed more fitting than to give to the land he had discovered the name of his birthplace—that classic Santa Fe founded upon the royal command of Ferdinand and Isabella opposite the opulent Granada, to vex the multitude of heretic Mohammedans who aroused the jealousy and resentment of the Spanish by their fiestas and tournaments, the valor of their sons, the Moorish beauty of their women, and the unequalled romance of their arched windows, stone lace-work, and balconies adorned by expert goldsmiths.

And what a thrill the conquistador must have felt, yet what homesickness must have been awakened within him as he gazed upon a plain watched over by two somber hills, so like that of his own land, with the Moorish Granada guarding the Castilian city. But the Valley of Castles (Valle de los Alcazares), the Teusaquillo or recreation spot of Zipa de Bacatá, its rightful possessor, was renamed by the new lords in mail and gorget. Bacatá fled, abandoning his dominion, to die in the heart of the forest, never knowing that after centuries justice should be paid him; that the "very noble and loyal city" should bear his name, slightly modified, as decreed by the Emperor Charles V in 1540. On December 3, 1548, it was given a coat of arms portraying a black eagle on a gold field, with an open pomegranate in each claw, and bordered by golden branches on a blue field.

¹ English version of an article prepared in Spanish by M. F. Anzola Samper.



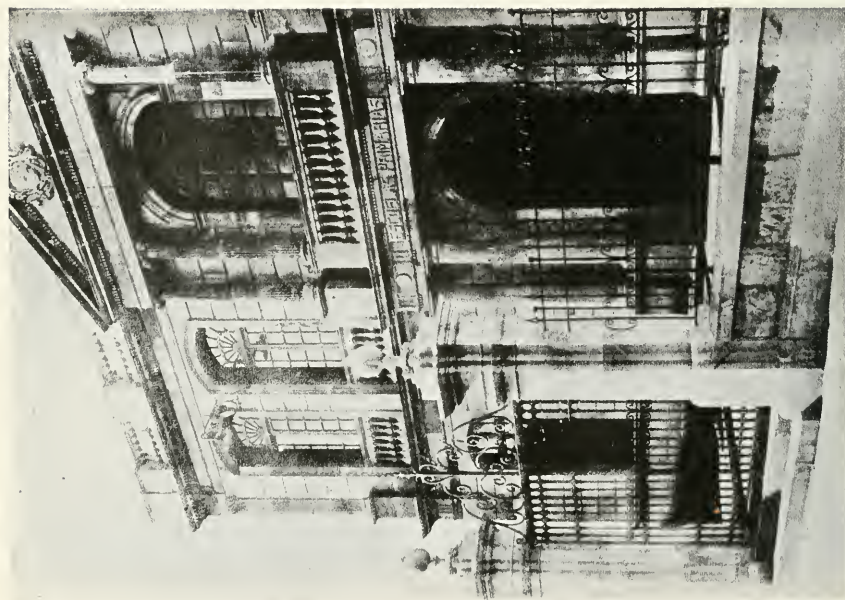
CENTRAL RAILWAY STATION.

This building, completed in 1917, is one of the most modern in the city, and indeed ranks in the first class of its kind in South America.



AVENIDA DE LA REPÚBLICA.

The Avenida de la República is the principal thoroughfare of the Colombian capital. The building with the flagstaff shelters the legation of the United States.



EDUCATIONAL BUILDINGS.

At the left is seen one of the boys' schools which the municipality of Bogotá has just completed. The headquarters of the School of Law, also recently constructed, are shown on the right.

Its first lieutenant governor was Herman Pérez de Quesada, brother of the founder, and its first chaplain, Fray Domingo de las Casas, of the Dominican order. Following Pérez de Quesada five captains governed in quick succession; but as the Court of Spain was at variance with these governors, in 1564 it was resolved to name as president, invested with extraordinary power, Don Andrés Días Venero de Leiva, the founder of the Colombian nationality. Twenty-two governors later governed at intervals, administrations now lost in the shadows of time, although among the group shines the name of the noble Knight Don Francisco de Borja, nephew of the Duke of Gandia, who governed for 23 years.

In the meantime Quesada, the learned Don Gonzalo, had died. His adventurous life had undermined his naturally strong constitution, and his death occurred in the little city of Mariquita, a town of his own founding. His arms and accouterments were transferred to Madrid, together with a volume of poetry inspired by his visionary imagination—the most cherished heritage he left to the city of Bogotá, in which a school of writers has sprung up, noteworthy for the purity of the Spanish it employs.

Santa Fe developed rapidly. It became an intellectual center; college after college was founded. Aristotle and Plato, having traversed thorny ground, navigated fabulous rivers and ascended abrupt peaks, had at last become the patrons of the erecles of the New World.

The primary academy (Seminario Menor) was opened in 1585; the College of St. Bartholomew in 1597; and Santo Domingo in 1605. The first Muisca grammar was printed by the order and at the expense of the president, Francisco de Borja. The College of San Francisco Javier was opened under the Jesuits, and eager auditors filled the lecture halls devoted to the mystic philosopher of the "Suma Teológico" at St. Thomas College. The influential Rosario College was established by Archbishop Cristobal de Torres in 1653.

The native race was becoming fewer and fewer in number. The cupidity of the conquistadores and the thirst for gold possessed by many of the governors led them to maltreat and, it might almost be said, to exterminate a large proportion of the natives. Intermarriage reduced the pure aborigines to a considerable extent. Entire tribes fled far into the interior, into mountain recesses practically impenetrable. When Hernán Pérez, the first captain, sought El Dorado, he alarmed the tribes dwelling in the southern sierras, who fled to refuges the conquistadores never attained.

In 1673 curiosity led the President, Melchor Leñán y Cisneros, to have a census taken of the city, which was found to number 3,000 inhabitants. A stream of sturdy immigration poured in from Spain, attracted by the riches of Santa Fe's fruitful plain of emerald green



ASTRONOMICAL OBSERVATORY.

The institution established in this building is one of the oldest of its kind on the continent, founded in 1803 by the renowned scientist, Don José Celestino Mutis, a leader in the investigations conducted during his generation. This observatory is one of the highest in altitude of South America.



OLDER ASPECTS OF BOGOTÁ.

Upper: Appearance of Cuarta Calle de Floriano some years ago. The street is now modernized throughout most of its length. Packs of animals are now prohibited to enter the city by municipal ordinances, so that the traffic nowadays is conducted by modern vehicles. Lower: St. Charles Palace (Palacio de San Carlos), formerly the President's mansion, but now the headquarters of the minister of foreign relations. To escape assassination, the liberator threw himself from the balcony, upon which the commemorative tablet appears, on September 25, 1828, when an attempt was made upon his life.



PRIMATE CATHEDRAL OF COLOMBIA, BOGOTÁ.

This place of worship, elevated to the rank of Minor Basilica by Pope Pius X, was begun in 1572 by Juan de Vergara, and completed in 1823. It occupies an entire side of the Plaza de Bolívar, and in one of its chapels the remains of Licenciado Gonzalo Jiménez de Quesada, the founder of the city, are interred.

and of a fertility comparable to only the lands bordering the Nile. Nobles and plebeians alike flocked in. The great señor himself arrived after a journey full of almost incredible incidents, in which he fraternized with the common people, sharing the common dangers.

A political transformation, the result of the importance of New Granada and of its fiscal situation, then took place, adding prestige to the proud blason of New Granada—the bud which was to produce dangerous fruit for the Spanish Crown. New Granada was elevated to a viceroyalty by a decree of King Philip V, and although the chimerical attempt of former years and his Viceroy Villalonga had failed, in 1740 it was an accomplished fact, and His Excellency Don Sebastian de Eslava regally began his governorship, invested with the title of viceroy.

Peaceful Santa Fe, accustomed to her simple, democratic President, bore the change in resignation, though she found herself involved in the turmoil of the court, and beheld the viceroy driven through her tortuous streets, after his customary siesta, in a coach of state drawn by mules in gay trappings.

The period of the viceroyalty forms a romantic story, fleeting, like everything which transpires at court, involved in obscurity, in intrigues, in picturesque romances in which the convent cell is often the penance for a life of dissipation. From time to time Santa Fe was surprised by good news. The Viceroy Don José Solís Foleh de Cardona, the terror of beautiful women, abandoned the viceroyalty and retired into the monastery of San Diego, leaving his chest of lapis-lazuli and gold to the poor and giving his jeweled shoe buckles, worth a fortune, to the monastery, and pouring out his fortune of doubloons for charity. The people commented upon this event in amazement.

Another viceroy, de Guirior, died suddenly two days after his inauguration. The suspicious imagined he had died from poisoning. The tolling of the bells saddened the populace and produced a morbid effect upon them. As the courts had taken the precaution of naming a temporary successor, and as he was in Santa Fe at the time of the death of Guirior, he was accused of the deed, so that Archbishop Flórez took the office, suspected of bearing the infamy of the Borgias.

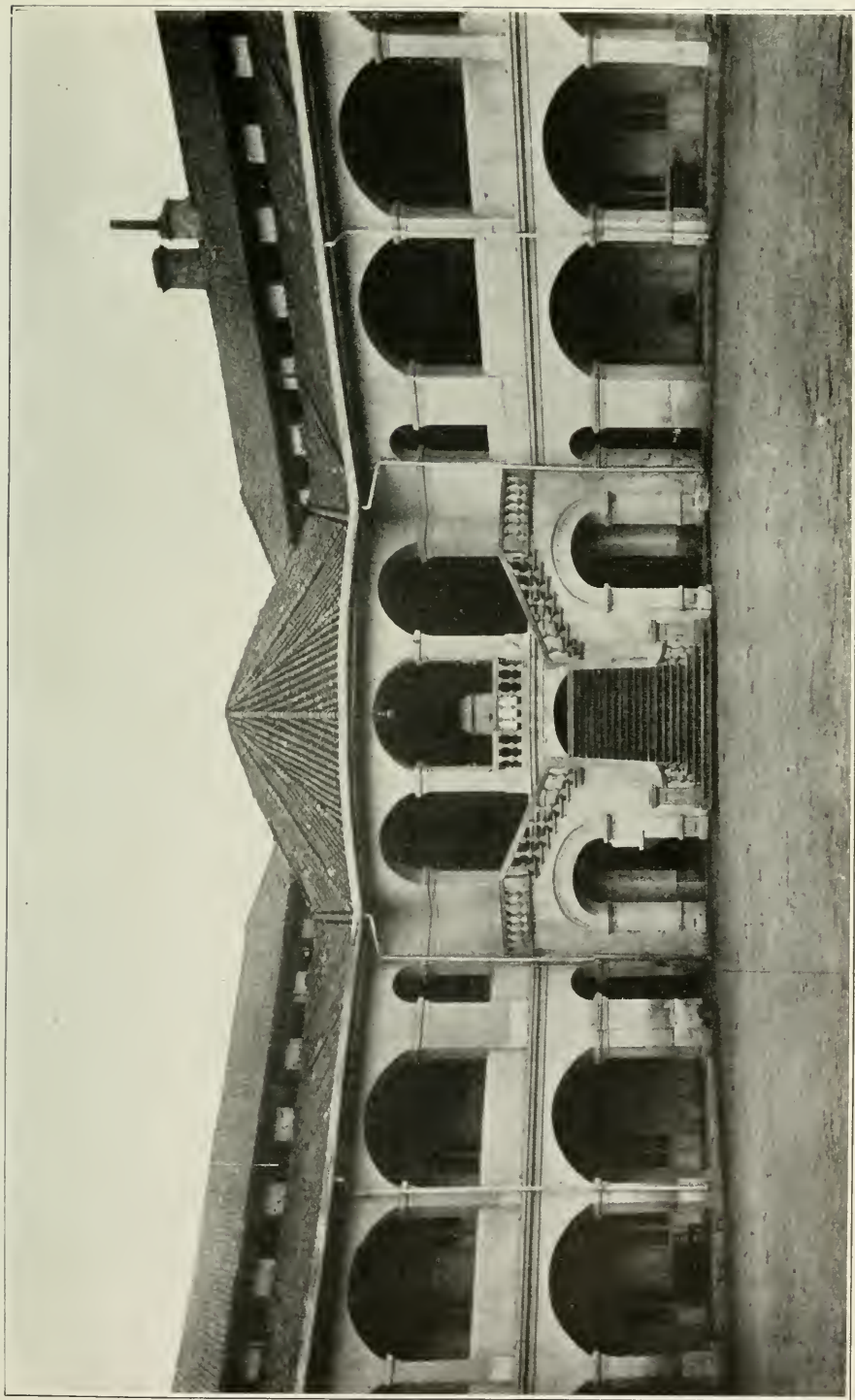
Then entered a viceroy who astonished all. His consort was the most beautiful woman whom Santa Fe had ever seen. They were showered with tournaments and festivals in their honor; the courtiers performed remarkable genuflections; regal bouquets were thrown at the feet of the first lady of the land, and evening parties at the palace became so frequent as to give rise to the expression “to dance in order to rule.”

Finally, when the viceroy, who was the proudest of his ancestry, arrived in Santa Fe, New Granada had undergone remarkable changes.



PATIO OF THE POST OFFICE BUILDING.

The post office was, until the middle of the past century, the principal cloister of Santo Domingo, one of the oldest and largest monasteries of the city. The departments of the post office, treasury, commerce, industry, and administration are all now housed within it.



MILITARY SCHOOL OF BOGOTÁ.

This edifice, at first used as a charities asylum, was remodeled and enlarged to meet the needs of the National Military School (Escuela Militar de la República).

New channels had been opened by the continual importuning of science; the lecture halls had sent forth a scientifically trained generation; the tempests which were let loose in France had carried across the highest peaks of the Andes to Santa Fe the dawn of a splendid new day with the translation of *The Rights of Man*; everything conspired to form a dark cloud over the head of Don Antonio Amar y Borbón, the last of the viceroys and a member of the royal family of Spain, whom the dawn of liberty caught unawares, with his lace ruffle about his neck and the viceregal staff in his trembling right hand; and he yielded like a slender reed to give the right of way to a true Republic.

Santa Fe of former years is so intimately linked with colonial history and with the war of independence that it is impossible to pass on without pausing to speak of Bogotá, the intellectual and cultured capital city, molder of thought, home of savants and thinkers, which surrounded by a legendary glamour, lies at the feet of the peaks of Guadalupe and Monserrate, whence the Conquistador Jiménez de Quesada saw the replica of the rocky crags of Moorish Granada.

Striking changes have taken place. Bogotá, formerly Santa Fe, is a metropolis which, while offering to the tourist no startling display of New York or Parisian skyscrapers, boulevards, or Broadways, claims attention by reason of the gifts with which nature endowed it. Spring is there eternal; the climate is ideal; the fertility of the soil surrounding is extraordinary.

Bogotá conserves vestiges of her colonial period. Over the portals of rambling old houses which have defied the ages are to be seen coats of arms. The century-old churches, venerable relics of the past, guard beneath panels of gold and costly wood collections of masterly paintings; Byzantine cornices of arabesque designs about the granite pilasters which support arches, and under dais of wrought gold and silver the choir lofts are to be seen; long spiral staircases, massive towers, and belfry spires stand out against the clear sky, just as they did centuries ago.

On the other hand, the tendency toward twentieth century building is irresistible, and the most up-to-date talent is displayed in the erection of luxurious homes or public buildings in Bogotá to-day.

The national capitol, situated on the southern side of the Plaza de Bolívar, resembles the Church of the Madeleine in Paris, and is considered one of the best stone edifices in South America. Its construction covered a period of 77 years, owing in part to the fact that work upon it was suspended at intervals of considerable length because of almost insurmountable difficulties that arose. It is the headquarters for the minister of war, supreme court, the minister of public instruction, the senate, and the chamber of representatives. In the central patio stands the statue of Gen. Tomás Cipriano de Mosquera,



PARKS OF BOGOTÁ.

Upper picture: Pond in the Parque de la Independencia, situated in the outskirts of the city. The Paseo Bolívar, which circles about the feet of the mountains Monserrat and Guadalupe, begins at the park, which is the principal recreation center of the city. Lower picture: Centenary Park (Parque del Centenario). Only the central part of this new park is seen. The bust in the foreground is of Antonio Ricaurte, the hero of San Mateo, which was unveiled in 1910 during the celebration of the first centenary of independence.



STATUE OF THE HERO OF THE BATTLE OF AYACUCHO.

The statue of Gen. Antonio José de Sucre, the work of the French sculptor, Verlet, is placed in the Plaza de Ayacucho, facing the building formerly occupied by the military school. Sucre, one of the heroic figures in South American independence and first President of the Republic of Bolivia, was born in Cumaná, Venezuela, in 1795.

a conspicuous figure in the great war and President of Colombia during several periods. The general himself laid the first stone of the building.

Along the entire western side of the plaza extend buildings uniformly of pure French style, and along the northern side, modern buildings occupied by banks and commercial houses; the eastern side is occupied by the cathedral, a massive structure, the towers of which rise 30 meters, and some few old houses.

In the heart of the plaza there is a small park which attracts notice principally because of the statue of Bolívar the Liberator which rises upon its marble pedestal in the center of the square, being one of the finest works of the Italian sculptor, Tenerani.

From the Plaza de Bolívar the main thoroughfares extend in every direction, almost all paved with asphalt and kept in excellent condition by the municipality. Calle Real, the principal business street, and Florian Street are the most bustling of the city. The former, a wide thoroughfare, merges into Republic Avenue (*Avenida de la República*), flanked by modern buildings and traversed by electric cars. Columbus Avenue (*Avenida de Colón*) is interesting. A bronze statue of the discoverer at its head faces a statue of Queen Isabella.

Bogotá has commemorated the leaders of Colombian independence by naming parts of the city after them and by erecting statues in their honor. A heroic-size monument of Gen. Santander stands in the park bearing his name; another of the scientist Caldas in the Plaza de las Nieves; still another of Gen. Antonio Nariño, the precursor of independence, in the Plaza Nariño; of the "Gran Mariscal of Ayacuecho" in the Plaza Sucre; busts also have been placed in various localities of the valiant Gen. Hermógenes Maza, of Pola Salavarrieta, the heroine of Graduas, of the Gran Capitán Ricaurte and of the savant Camilo Torres. Similar homage has been paid to her scientists, including her contemporary sons, Rufino José Cuervo, the noted humanist and philologist, and to Miguel Antonio Caro. Cervantes, author of the immortal *Quixote*, is commemorated by a bust in the Plaza de España.

Among notable buildings Bogotá boasts of the Columbus Theater, of such architectural soundness and beauty of form as to rank among the foremost examples of the type in America. Several other theaters, including that owned by the municipality, and five commodious motion-picture houses, one of which has a seating capacity of 4,000, are popular amusement places. The Colombian capital has long been the patron of science: The astronomical observatory, National Library, the academies, museums and universities form a group of institutions which maintain the right of Bogotá to be considered the "Athens of the South," the name with which a European scholar christened her.



THE CATARACT OF TEQUENDAMA.

This cascade is a favorite subject with Colombian bards. Humboldt and other explorers have given us picturesque descriptions of the waterfall, which is situated 13 miles out from Bogotá.



PRESIDENTIAL PALACE.

The official residence of the Presidents of the Republic is located two blocks from the Plaza de Bolívar on Calle de la Carrera. It was constructed and opened under the administration of Gen. Rafael Reyes.

The observatory owes its existence to the efforts of the naturalist, José Celestino Mútziz. It is octagonal in form, 2,636 meters above sea level; hence, is one of the highest of the world and possesses a valuable set of instruments for taking observations.

The National Library contains rare and even unduplicated books, and, in all, the most complete collection of colonial archives.

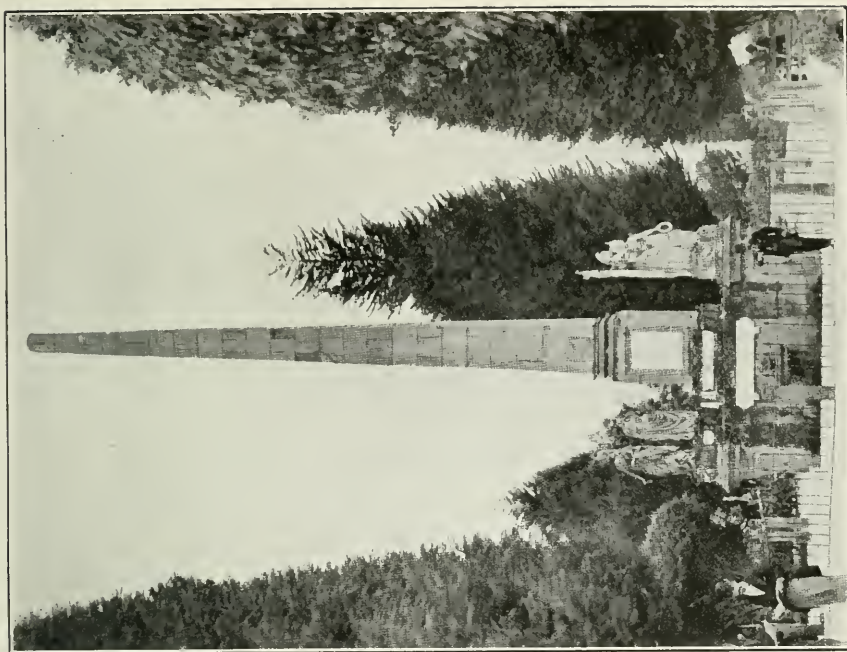
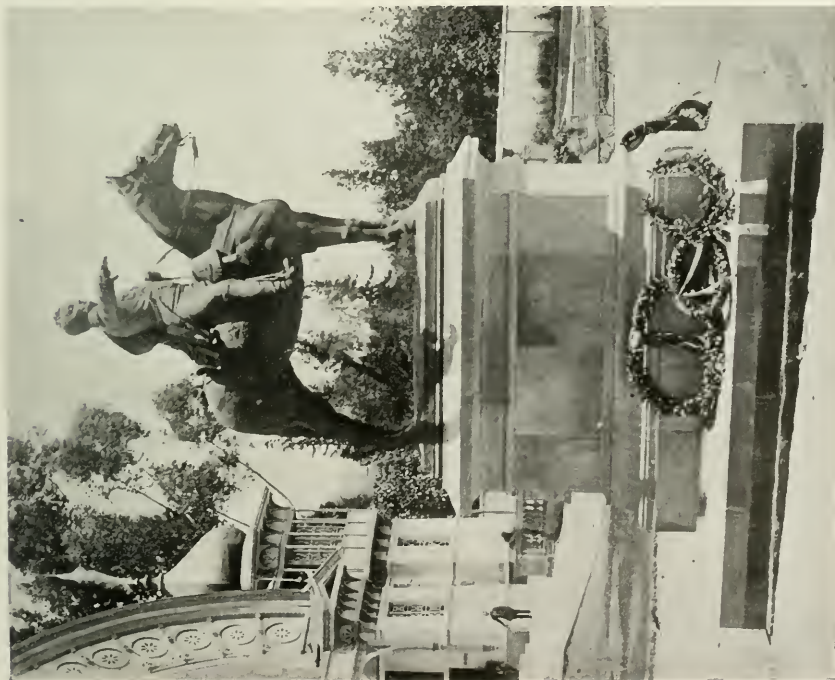
The academies were established by devotees of science and art. The Language Academy recently took possession of a new building. The Museum of Bogotá contains objects of beauty and considerable historic worth. A Museum of Natural History founded by the Christian Brotherhood (Hermanos Cristianos) possesses exhaustive collections.

The universities happily own adequate buildings. Recently the building to be used for anatomic lecture halls was completed, equipped much like the corresponding building of the University of Paris. Public instruction is becoming constantly more widely diffused and Bogotá is the center of secondary schools supported by the Government. The Minister of Public Instruction strives earnestly to fulfill his trust, and statistics concerning the number of students in attendance at public schools are an evidence of the steady diminution of illiteracy in Colombia.

Among the buildings owned by the Government the Palace of St. Charles (San Carlos) and that of La Carrera should be particularly considered. The former was the official residence of Bolívar the Liberator and all of the long series of presidents in office from the birth of the Republic until 1908, the year in which La Carrera, a magnificent presidential palace, was finished. The St. Charles Palace was then set aside for the office of the chancellor, and although not of imposing proportions, the severe simplicity and grace of its lines make it a structure worthy of governmental purposes.

The city has a number of parks in which tropical flora produce handsome specimens. Independence Park, opened in 1910, is a bit of beautiful forest; its deep green meadows, varied shrubs and ever-blooming plants lend it an irresistible charm. The east entrance to it is the head of the Paseo Bolívar, a picturesque drive from which the city is seen impressively reposing upon the plateau.

An electric line leaving the northern part of town links the city with Chapinero, the Versailles of Bogotá, a recreation center surrounded by villas and castles set in the midst of gardens. The architectural unity or harmony, the good taste manifested in the arrangement of grounds, the contour of every country seat, the abundant clear water, the perennial springtime, the proximity of the city, the moderate price of provisions, everything, indeed, contributes to the attractiveness of the place as a recreation spot. At



HISTORICAL MONUMENTS OF BOGOTÁ.

Left: Statue of the Liberator, erected in Independence Park (Parque de la Independencia) and unveiled during the celebration of the centenary of the Republic. The statue, which is one of the most artistic in America, is the work of the celebrated French sculptor, Fremiet. Right: Monument to the Martyrs in the park bearing the same dedicatory title, formerly known as the Huerta de Jaime.



COURTYARD OF THE PRESIDENTIAL PALACE.



THE CAPITOL OF BOGOTÁ.

This building is one of the most noteworthy examples of classic architecture in America. It was half a century in building, the first stone having been laid by President Tomás Cipriano de Mosquera. The capitol faces the Plaza de Bolívar, in which the statue of the liberator sculptured by the Italian Tenerani is placed.

present many cottages are being built and the car line extended in that direction.

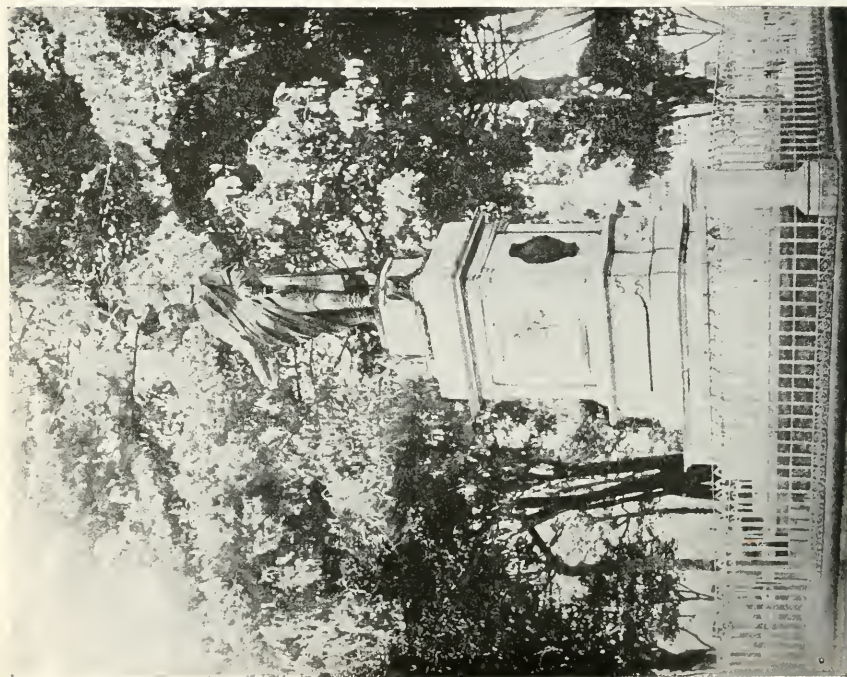
Bogotá, by the refinement of its inhabitants and the luxury in evidence, might be taken for a European city. Culture is marked; foreign news is received promptly; desirable features of Paris and London are imitated to stimulate progress. Unfortunately, owing to the extreme narrowness of the streets, many of the architectural features of the city can not be appreciated; nevertheless, upon contemplating the constant progress of the capital and its development, one is forced to the conclusion that Bogotá will become an imperial city in the western world, the heart of the plateau which extends 16 leagues from north to south and 8 from east to west.

The mean temperature of Bogotá, which lies under $4^{\circ} 36'$ north latitude and $76^{\circ} 34' 8''$ longitude west of the meridian of Paris, and at 2,611 meters above sea level, is 15° C.

The population of Bogotá has quadrupled in half a century. In 1850 it had 35,000 inhabitants; to-day, 150,000. In 1835 a careful census of urban property revealed 2,720 houses, and during the present year there are estimated to be more than 10,000. It is to be noted that the houses of Bogotá are usually very roomy, covering space sufficient to allow for large open patios. The extent of the city from north to south is 8 kilometers and from east to west 4 kilometers. In the outskirts east of the city rivers of potable water rise, one being an outlet of Verjon Lake, which is situated at an altitude of 3,260 meters.

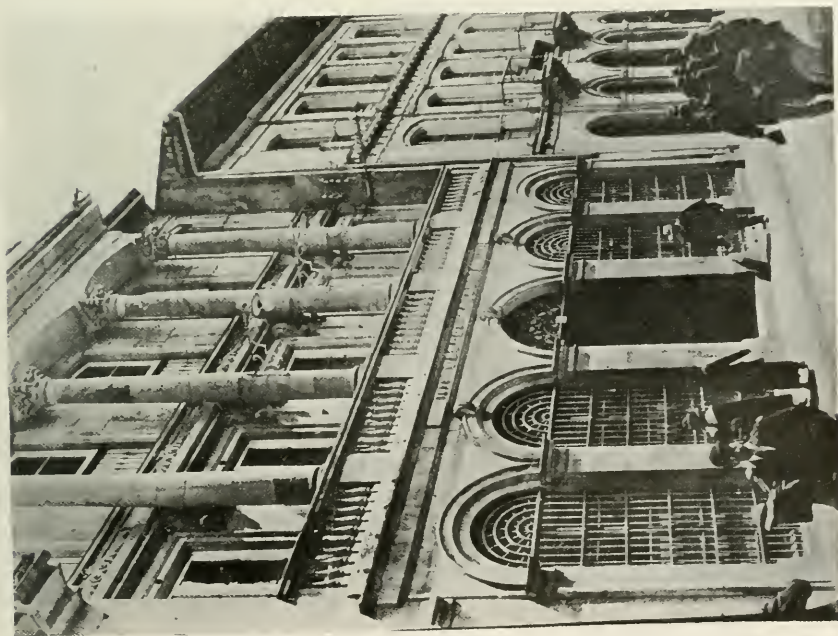
Economically Bogotá is on a sound footing, being a commercial and banking center of constantly growing importance. There are five banks of large capital, the American Mercantile Bank (*Banco Mercantil Americano*) having been established last year, and at present the establishment of another is under consideration. Several insurance companies contribute to the success of financial enterprises. Large export houses have founded headquarters there and importation is conducted on rather a large scale. Foreign credit companies in the United States and Europe are an added factor in Bogotá's development. Industry also is being exploited. Thread and textile industries compete with foreign establishments in the production of fabrics and cloth. Stock raising is increasing considerably on the plain, the strains having been carefully selected from stock brought from England, and the wool market is plentiful. Tanneries and shoe manufactories have grown up; tobacco is made into cigarettes which rival those of Habana. Plants for making matches, soap, beer, ceramics, soft drinks, liquors, porcelain, moldings, cement tiles, and glass are well equipped with modern appliances and inventions.

Electricity in all its phases receives great attention. The car service which crosses the city at almost all angles is quite creditable;

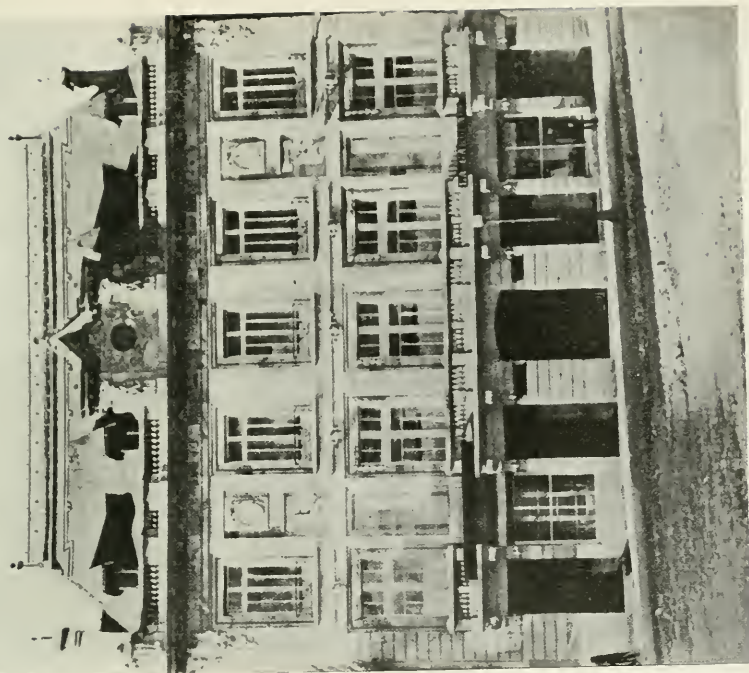


STATUES OF BOGOTÁ.

Left: Statue of Gen. Francisco de Paula Santander, ex-vice president of Gran Colombia and first President of the Republic of New Granada. Bolívar called him the "Man of Law" (Hombre de las Leyes), by which name he is known generally. The statue is placed in the park of Santander. Right: Statue of Antonio Nariño, in the park of the same name. Nariño is one of the striking figures in Colombian history. A man of erudition and indomitable will, he initiated the movement for independence in his country, for which he received the title of Precursor.



[Bogotá's increasing importance as a commercial center is perhaps best indicated by its constantly growing banking facilities. Two of the city's financial institutions are shown above, the one on the left, the home of the Banco de Colombia, founded in 1875, and the one on the right, the Banco Hipotecario, founded in 1910. There are three other banks in the city—the Banco de Bogotá, founded in 1870; the Banco Central, founded in 1935; and the Banco Mercantil Americano de Colombia, established recently.



BANKING INSTITUTIONS OF BOGOTÁ.

scientifically installed plants, operated by the municipality and individuals, furnish power and light. The Electric Power Co. (*Empresa de Energía Eléctrica*) is the most important of its kind in the country. The total capacity of its dynamos is 3,635 kilowatts. The generators produce energy of 6,700 volts 60 periods, which is transformed and then transmitted to Bogotá by a 26-kilometer aerial line.

Well-established telephone service connects the city with distant towns. At present the government is considering the erection of barracks modeled after European plans. The project of changing the old Spanish ones for modern buildings is feasible, since the army of Colombia is a permanent national feature. There are several hospitals for the sick and aged, one orphan asylum, and various charitable establishments sustained by the municipality or individuals. Bogotá is particularly generous in public charities. An addition has recently been made to the cemetery just outside the city. Private mausoleums in this cemetery are works of art surrounded by cypress and pine trees.

As has been noted, Bogotá is possessed of many advantages both in itself and in the varied climates and temperatures of neighboring towns. A few hours from the city warm and hot districts may be reached by a railway which leads down the mountainsides. The northern part of the country, with a climate similar to that of Bogotá, is also reached by a 62-kilometer railway; the southern by a 30-kilometer railway which passes the Tequendama Falls, an astonishing cataract. The plain to the west is penetrated for 30 miles by a line which connects with the Girardot Railroad.

That Bogotá is progressing with extraordinary strides is evident. Improvements are being made daily. At the centenary of the battle of Boyaca this year the city will render tribute to her forefathers by inaugurating a wide avenue, bordering a large part of her western boundary, patterned after a French model.

Patriarchal traditions are conserved with religious fidelity; hospitality toward the foreigner and gallantry, qualities characteristic of Bogotá, unite to give her the dignity of true aristocracy. Her intellectual power, the innate intelligence of her sons, her halls of science, and the pure Castilian spoken in her streets have caused her to be called the Athens of the continent, the fountain of science, the "city of light."



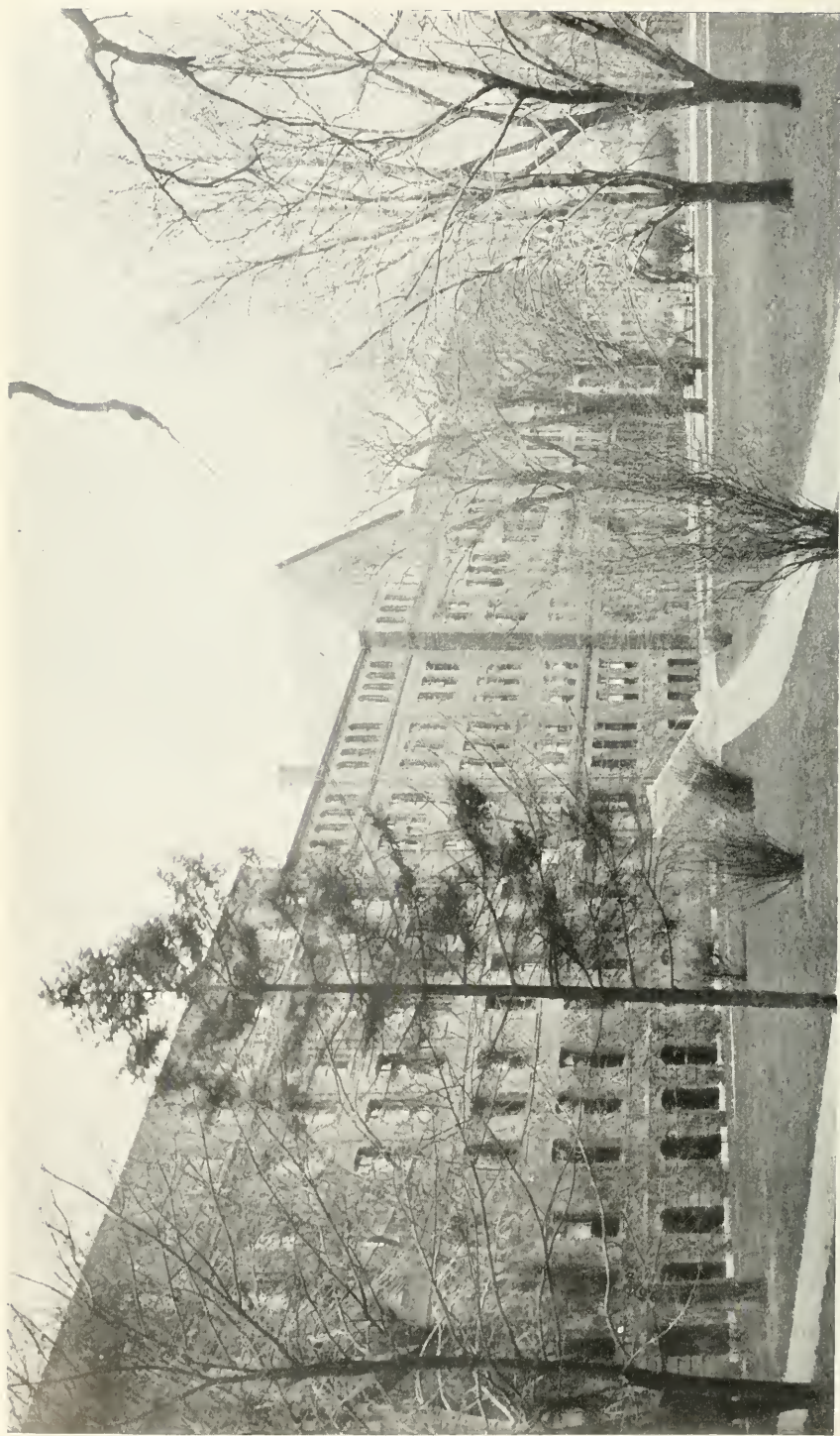
DR. OLIVEIRA LIMA'S IMPRESSIONS OF HARVARD UNIVERSITY

IN the December number of the Review of Law, History and Letters ("Revista de Derecho, Historia y Letras") of Buenos Aires appeared the lecture, given in August, 1918, in the University of La Plata by Dr. M. de Oliveira Lima, the distinguished Brazilian historian and diplomat, concerning his professorship at Harvard University. The BULLETIN takes pleasure in reproducing below a free translation of practically the entire address, not alone because of the prestige its author justly enjoys in intellectual circles of the continent, but also because in it he delineates the very spirit and atmosphere of that institution of higher learning which is undoubtedly the oldest and perhaps the most thoroughly organized in the United States. Dr. Oliveira received in 1915 the signal honor of being called by the university to take charge of the recently created department of South American history and economics, the first time such a distinction had been conferred upon an Ibero-American. The address, entitled "My Professorship at Harvard," originally delivered in Spanish, was substantially as follows:

My professorship at Harvard was of six months' duration, or rather five—the length of time considered a semester in the United States. It was made possible by the creation of a special chair of South American history and political economy, to form part of the regular curriculum, at the New England University, the oldest and most conservative in the country. The founders of the department hoped to invite intellectual men from our southern continent successively to fill the chair, but the great war and attendant contingencies prevented carrying the project into effect as originally planned, so that since my term the department has been conducted by members of the permanent faculty.

However, persons capable of this task are not lacking in the United States. Latin America is now the "cynosure of neighboring eyes," the object of inquiry and investigation on the part of scholars as well as commercial and industrial houses. It might be more accurate to say that the two mentioned factors in stimulating curiosity unite to produce a single effect.

The fact is that at Harvard there is a professor of undisputed competence in all matters pertaining to Ibero-America—Mr. Merriman, the author of a scholarly history, recently published, of Spain from the Visigothic invasions until the reign of Ferdinand and Isabella. In Yale Prof. Hiram Bingham is an authority on Peruvian subjects; at Colombian University in New York City, Prof. Shepherd has reviewed the southern continent in various phases; at the State university in Urbana, Ill., Prof. Robertson, the biographer of Miranda, is familiar with our history, especially that portion of it



THE MUSEUM, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

The university museum contains a zoological section, known as the museum of comparative zoology; a botanical section; a mineralogical section; a geological section; and an anthropological section, known as the Peabody Museum of American Archeology and Ethnology.



SEVER HALL, HARVARD UNIVERSITY, CAMBRIDGE, MASS.
Sever Hall is one of the lecture and recitation buildings of Harvard College.

known as the period of independence; at Stanford, Prof. Martin is possessed of an acquaintance equal to his vast intellectual curiosity as to the development of political institutions in New Spain.

In order not to unduly extend the list I will omit other names equally meritorious of attention. I wish, however, to refer particularly to the learned president of Leland Stanford Junior University, Dr. John C. Branner. An eminent geologist, he has since 1874 studied the geological formation of Brazil, in which country he traveled extensively, being so familiar with the language as to have written a Portuguese grammar. Dr. Branner, more fortunate than some scientists, has succeeded in seeing the National Geographic Society of the United States publish his geological map of Brazil, accompanied by his treatise upon the territory.

My experience as a teacher leaves one of the most delightful memories I possess. Years ago, indeed, before I had been superannuated by my appointment as diplomatic minister, I had visited the 12 principal universities of the United States, giving a series of lectures which were later compiled in a volume. However, I realized that the lectures were for professors rather than students, who lack the experience, judgment, and collateral information necessary for an adequate conception of the matter I was discussing. Hence when I became a professor I made a digest of a mass of literature and prepared a course of 25 lessons at once the simplest and most advanced I believed my pupils capable of comprehending. The result was pleasing. By personal study together with the statements of the professor, the pupils made extraordinary progress in five months, as was demonstrated by both the written examinations they took every month upon specified subjects and by the theses upon themes chosen from 80 I presented for individual selection.

It is the custom in North American universities for the professor to lecture one or two hours a week besides conducting the regular recitation classes, explaining in such lectures how the subject matter should be understood and what books may most profitably be read to furnish side lights.

Since the student is allowed to elect his particular courses from the curriculum—that is, from the department of history he might prefer Latin-American to that of the French Revolution, for instance—it naturally follows that he is actually interested in the matter. No one obliged him to take the course, so evidently in choosing it he had a direct object in view. Of my 56 pupils, some were preparing for the teaching profession, intending to specialize in Latin-American subjects; others expected to enter the diplomatic or consular service and felt the need of becoming acquainted with the history and political economy of the countries to which they might be sent; still others looked forward to commerce and trade only, but were convinced of the value of studying the intellectual and spiritual aspects of Latin character with which they were to deal; while others were to enter upon scientific investigations, such as natural history, and were desirous of rounding out their knowledge of the field of future exploration.

Under such ideal conditions, the course having been selected with a definite object in mind, it is natural that it would be pursued diligently and seriously. At Harvard no other class of work is tolerated. During my professorship on two occasions I received requests for information about members of my class who were not making a creditable record in other classes. I was asked my opinion concerning the reason for their attitude, whether I attributed it to mental deficiency or mere indolence.

At the same time students take active interest in competitive and social affairs. Their enthusiasm for athletics is notorious; football is a veritable institution, not unlike the Grecian sports. In the great amphitheater of Cambridge, the seat of the university, facing Boston on the opposite side of the Charles River, 40,000 spectators from all parts of the country flock to witness the famous Yale-Harvard match.

Besides these pastimes, the students make merry in their clubs, some departmental, and others simply fraternal. For admission to societies of the latter type a myste



NEW BUILDINGS, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

The number of students at Harvard increases gradually from year to year, and to accommodate these new buildings must be erected. Westmorley Hall (upper) and Randolph Hall (lower) are two modern private dormitories.



AUSTIN HALL, HARVARD LAW SCHOOL, CAMBRIDGE, MASS.

The Harvard Law School was established in 1817, and is the oldest of the law schools now existing in the United States. Austin Hall, one of the two buildings of the law school, was erected in 1883.

rious burlesque initiation is undergone. Admitted in total darkness, the neophytes, of whom is required the presentation of a written thesis, are submitted to a trial consisting of a cross-examination put in absurd terms, to all of which the candidates, must reply without becoming angry or confused. I attended the initiation of Quentin Roosevelt, who subsequently met a tragic death as a flyer at the front, into the Signet Club. At the time of the ceremony, which took place toward the close of 1915, no one dreamed that the young man's life would so soon be forfeited.

Professors attend such frolics, not to spy upon the students, but rather to share in the hilarity, without in any degree relaxing their authority, prejudicing their influence, lessening their dignity, or causing any liberties or undue familiarity to be shown toward them by the students.

I do not know how this system is regarded at the University of the Río de la Plata. In my country professors generally consider it a lack of sedateness, if not actually a breach of propriety, to mingle informally with their students, although their aloofness from such occasions does not in anywise increase the admiration won by every individual member of the faculty for what he is or for his erudition. I believe, in fact, that respect is engendered in inverse proportion to the distance maintained between the faculty and the student body.

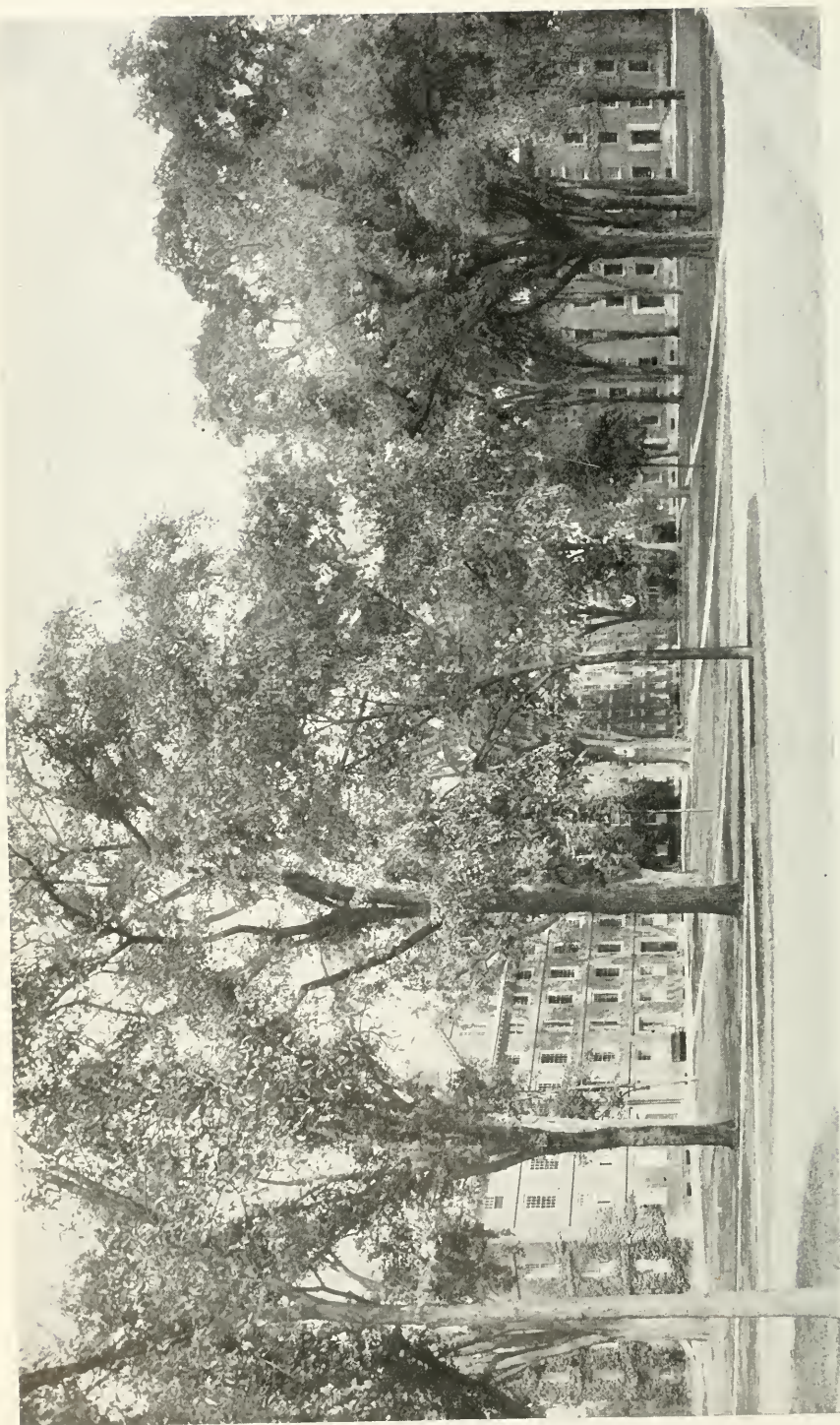
It was not unusual, after my class, which was held at 1 in the afternoon, for one of my pupils to invite me to lunch with him at his club. I never refused such an invitation, and we both profited by the conversation. He would gain supplementary information on South America and I on the States. In Harvard, as at other universities, young people are accustomed to the social life, or what is commonly known as sociability—"mingling." Every Saturday the wives of the professors give a tea for the students alone, and at Harvard these occasions are seldom shared with young women, as in the West, particularly, where coeducation is common.

Every Sunday evening, also, the president and his wife open their home to the students. I say "open" where possibly "used to open" would be more accurate, because the war has changed all phases of normal student life and made it necessary to disregard even the venerated university traditions, with the departure of both students and faculty, the former to prepare for active service in Europe, the latter group to assist in allied activities.

Another marked feature of North American universities which speaks volumes in their favor is the veneration felt toward the old professors, as well as the fondness they themselves demonstrate toward the younger instructors, untainted by envy of the passing generation for the rising. This Janus-faced devotion is so cordial that when retired professors not infrequently choose to continue to live upon the campus. Such was the case with David Starr Jordan, scientist, pacifist, and president of Stanford; with Angel, minister in China and president of Ann Arbor; and Andrew White, ambassador to Petrograd and Berlin and delegate to the first peace conference.¹

Andrew White takes the same interest in his Cornell University that he did while administering its affairs before he was sought for diplomatic missions. He lives on the campus, a beautiful little city set apart from the bustling, sordid city. He gave his library to the institution, carefully placing it where it would be of most convenient access, and he takes pains to have the buildings beautified, especially the chapel, erected by him, in which all cults worship alternately, the Catholic, Protestant, and Jewish. Andrew White goes so far as to permit himself pontifical privileges; in showing me a window in which the most exalted types of womanly virtue were exemplified, all the figures being of saints from our Roman calendar except that of Florence Nightingale, the heroine of the Crimean War. He remarked, "She was canonized by me."

¹ Dr. White died Nov. 4, 1918, four months after Dr. Oliveira Lima delivered his address.



HOLLS, STOUGHTON, AND HOLWORTHY, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

These three dormitories are among the oldest buildings at Harvard University standing in the historic Harvard College yard. Harvard College was founded by John Harvard in 1636, and the university into which it has grown has at present nearly 4,000 students.

I consider North American universities ideal for their pedagogical spirit. Such was the impression I received during my visits to them. They vary among themselves, certainly; every one is noted for the college of which it makes a specialty: Princeton excels in theological training; Cornell is superior in her college of engineering; Johns Hopkins in medicine; Wisconsin in agriculture; Yale in law; Harvard in what was formerly known as arts. The feature I consider ideal of the institutions treated collectively is the eagerness with which they seek intellectual development, in the zeal they display for mental activity.

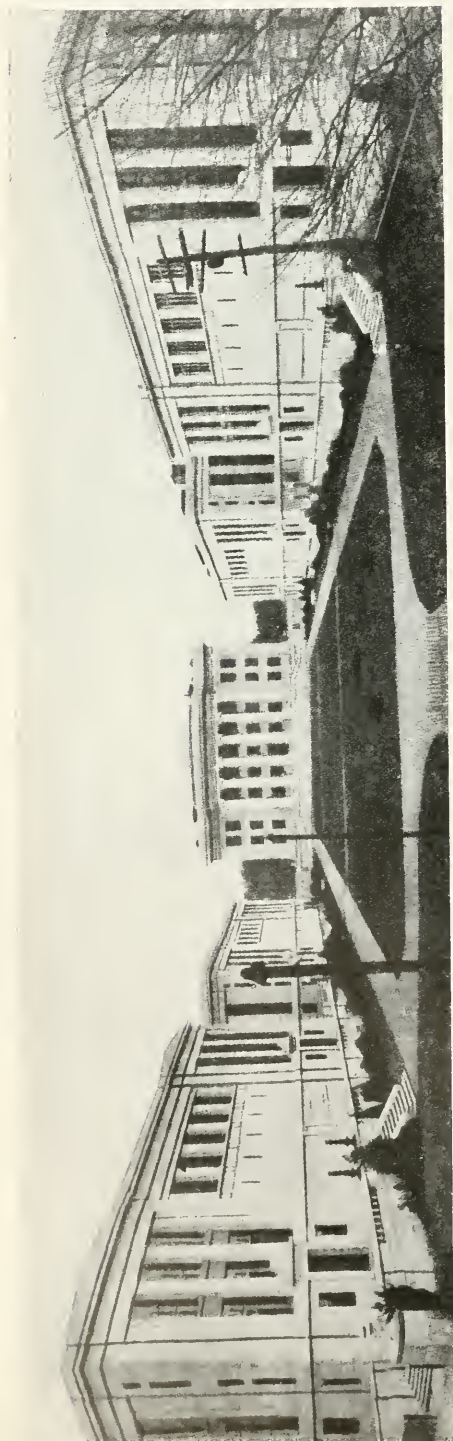
It is true that not all who are sent forth from the American university are savants. It is even possible that the half never reach brilliant success. But though only a portion of the graduates attain it, the institution is vindicated. Moreover, if not all pupils dedicate themselves with identical devotion and wholeheartedness to mental discipline, and if all pupils do not show the same advancement, it may be said, however, that among the body of professors there are very few who think lightly of their responsibilities.

It must first be noted that the professors of the United States are almost never politicians in the professional sense of the word. They endeavor to enlighten and guide public opinion, to influence public thought by precept upon precept, and attempt to prove the logic of their judgment and win prestige for their theories. In this light they do participate actively in politics without, however, becoming involved in partisanship, although everyone has his favorite party; indeed, it would be impossible to imagine a North American who did not ally himself with some party. This forms part of his civic life. He adds his vote to the party in whose hands he wishes to see placed controlling power.

By politics is meant, then, the nobler and loftier significance of the term. The professors are truly such and do not attempt to play any other rôle, as they devote their lives to instruction and further investigations in what is known as original research. The library recently installed at Harvard University, which was a gift of the value of \$2,000,000, seems to have been planned with the very end in view of facilitating precisely such studies. Every professor has his section of independent works kept in the corresponding bibliographical division. There are about 200 such lay Benedictines, who enjoy immediate access to the books they want without the intervention of others. Every man arranges his office as he chooses. Some are luxurious, with soft, thick rugs and ample easy chairs; others are simple and austere. Only one requirement is made, that there shall be no curtain at the door, half of glass, which closes the office. In that manner it was ascertained that one professor spent five hours over a cup of tea he had prepared in his office, after which he enjoyed a voluptuous siesta in the dark, silent quarters.

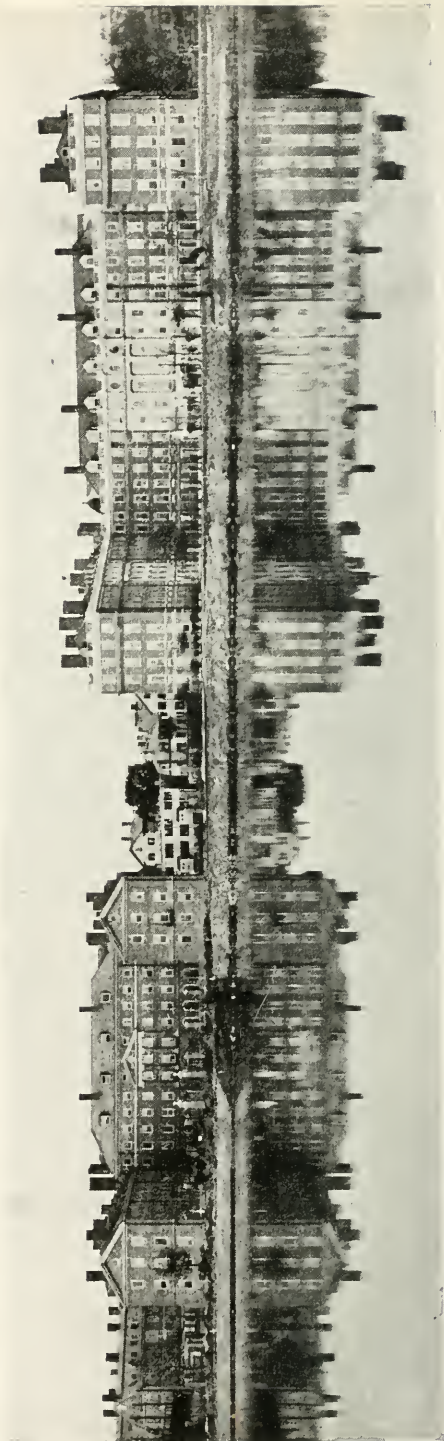
A very desirable custom is the interchange of professors, so that the western instructors give occasional courses in eastern universities, and vice versa. This system has undoubtedly contributed to the growth of a national spirit, tending to resist political disintegration and the social upheaval which to-day imperils the world. Some such method should be adopted by all nations desirous of preserving their unity of purpose and character. By going from one university to another, instilling the traditions of a common past and demonstrating the identity of interests in the future of all sections of the Republic, American professors are best serving the cause of patriotism, at the same time gathering fame among the intellectual aristocracy.

The professor's renown often is the result exclusively of his intellect alone, and it not infrequently happens that the Federal Government seeks in universities, not only for members of scientific and administrative commissions, but also diplomatic representatives. Until a short time ago the president of Cornell was minister in Greece; Prof. Reinsch, of Wisconsin, is at present minister in China; Ambassador Morgan, who for some time has been very successful as representative of his government in Brazil, was called from an assistant professorship at Harvard. The universi-



TWO VIEWS OF HARVARD UNIVERSITY, CAMBRIDGE, MASS.

Upper picture: The Harvard Medical School was started as a branch of the university in 1782. In 1906 the school moved into the new buildings shown here on Longwood Avenue, Boston. There are five buildings—one for administrative and four for laboratory purposes. Lower picture: Dormitories for members of the freshman class at Harvard on the banks of the Charles River.



ties, then, are the molders of scholars whose ideals, untarnished by the thought of "back-door politics," are of the utmost value in training the political conscience of the American youth and in preparing him for citizenship.

A further commendable aspect of life in the typical North American University is the absence, or apparent lack of religious contention. I say apparent, because, naturally enough, denominational schools exist in some places which tend to exploit their certain cults, though taking care not to come into open conflict with the others. Since Mr. Rockefeller had endowed the University of Chicago with millions, it is only to be expected that it should be Baptist in spirit, like its founder and patron. Harvard is essentially reformist, which led the Catholics of Boston to create their own university.

Nevertheless, these universities do not live in a perpetual state of war. All roads of the new world lead to Washington, as those of the old led to Rome. American Catholicism is forced to assume a militant attitude for the simple reason that it has not the protection of the state and it is surrounded by such strong competition. And this rivalry does not reveal itself in open hostility, but by modern appeals to the intellect rather than medieval compulsion. Rivalry is displayed in the construction of beautiful buildings, arrangement of programs, and in the fitness of the teaching staff.

Centers of culture these universities are, in the most intense, widest, and at the same time most refined sense. In a large proportion of educational establishments boys and girls receive instruction from the same professor, in the same classroom, and join in sets of tennis and golf. Many of the American universities are located in small towns, which in fact owe their existence to their presence, or at least are established at great distances from large cities, so that the student life differs widely from that in South America.

There are dormitories for boys and girls, great houses like hotels, under a rigid system, in which every student has his room or room and study, with a common dining hall. Every available room in such a dormitory is taken because of the advantages of being the most independent and economical system. There are also house clubs, fraternities, and sororities, in which a score of students live together, electing a directorate, which delegates the administration to a manager. Some of these clubs have commodious headquarters, others less pretentious, depending upon the expenditure upon which the members of the organization agree.



PLATINUM AND PALLADIUM IN BRAZIL¹

SO much attention has deservedly been given to the important supplies of platinum and of the platinum metals that have been derived from Colombia² that the deposits existing in Brazil have been somewhat neglected. In view of this it seems timely to offer some important information thereon, communicated by investigators who have carefully gone over part of the ground. Unquestionably platinum is to be found in many places in Brazil where its existence is still unsuspected, and when the deposits now known and the others which will be discovered later are systematically worked, Brazil will be able to contribute largely to the world's stock of the valuable metal, and also of the related metals.

The occurrence of platinum in Brazil was already known in 1801, when it is noted by José Viera do Conto.³ He notes the finding of the metal in the sands of the Lages, near Conceição, municipality of Serro (Minas Geraes), and in the Rio Abaete (Nova Lorena Diamantina). Doubtless at this time gold with palladium was sometimes mistaken for gold with a platinum content, since the former metal had not yet been determined. It was only in 1805, and more fully in 1809, that Wallaston gave a more detailed description of Brazilian platinum, calling attention to the fact that there were met with in the sands many microscopic crystals of zircon, considerably rolled, and contrasting sharply in structure with the grains of platinum which totally lacked the characteristic of being rolled.

A platinum locality in Brazil was reported as long ago as 1812 by the English mineralogist, John Mawe, who traveled in the interior of Brazil by authority of the prince regent of Portugal.⁴ In the course of his journey he came to a place which he says proved one of the most interesting, in a mineralogical point of view, that he had hitherto visited. It was called Largos (sic), but also bore the name

¹ By George F. Kunz.

² "Platinum and its relation to Latin America," by George F. Kunz, *Bull. Pan American Union*, November, 1917, pp. 4-23.

"Platinum, The World's Present and Past Supply," by George F. Kunz, *Mineral Industry*, 1917, pp.

"Platinum, The World's Present and Past Supply," by George F. Kunz, *Mineral Industry*, 1918, pp.

³ "Memoria sobre as minas da Capitania de Minas Geraes," written in 1801, first published in 1842 in *Rio de Janeiro*, see pp. 12-15, 122.

⁴ John Mawe, "Travels in the Interior of Brazil, particularly in the gold and diamond districts of that country, by authority of the Prince Regent of Portugal," London, 1812, pp. 157, 209.

ouro branco (white gold) "in allusion to a granular substance, not unlike gold in size and weight, found in a gold washing in the bed of a stream. This substance, which has since proved to be platina, was discovered many years ago in the cascalhao (gravel) below the vegetable earth, and incumbent on the solid rock, accompanied with gold, and black oxide of iron." This composition induced the belief that it was gold united with some other metal, from which it could not be easily separated. As, however, the amount of gold was small and no one then recognized the value of platinum, but little effort was made to utilize the deposit, which was finally abandoned.

Mawe secured a specimen of the substance, and states that it seemed to contain osmium and iridium, and that the grains were rougher than those found in the Province of Choco, Colombia. He suggested that as the substance was at the time of this writing known to be platinum, work could scarcely be profitably resumed. "as the demand for that article is at present so small that the quantity sold would hardly pay expenses."¹ What a difference from the state of things at present.

The platinum found in the Rio Abaete, State of Minas Geraes, Brazil, and in greater quantity in its tributaries, is pronounced to be strikingly similar to that of the Urals, although the deposits of this metal from Condado differ markedly in this respect. According to Dr. Eugen Hussak the character of the occurrence in the first-named deposits may be thus formulated:²

1. Richness of the fine and heavy sands in iron minerals, magnetite, chromite, and also to a characteristic extent in perovskite.

2. Occurrence of olivine rocks, with ilmenite and picroporphyrus, in the surroundings of some affluents of the Rio Abaete, which are known to be platiniferous and which rise in the Serra da Matta da Corda.

3. Similarity of the chemical composition of the platinum, as well in richness in iron, and thus in specific gravity, as in magnetic action.

4. Structural similarity of the platinum grains in both occurrences in the Urals and in the Rio Abaete. When they are larger than 1 millimeter they show themselves to be much rolled, while in the finest sands there not rarely appear minute crystals, clearly formed, of iron-platinum and osmiridium.

5. Finally, a likeness consisting in the regular inclusions as described in the platinum of Nizhne Turinsk, of particles of osmiridium, having six clearly defined faces, parallel to the octahedral faces of the cubic crystals of platinum.

¹ Mawe adds later on (p. 277): "Platina may be obtained in tolerable quantities at Largos, but the place which produces it has been abandoned from want of a market."

² Eugen Hussak, "O Palladio e a Platina no Brazil," Port. trans. by Miguel Arrojado Ribeiro Lisboa, and Manoel Arrojado Ribeiro Lisboa, *Annaes da Escola de Minas de Ouro Preto*, No. 8, 1906, pp. 181, 182.

An analysis of a combined specimen of magnetic and nonmagnetic platinum (the latter in small proportion) gave the following results:

	Per cent.
Insoluble residuum.....	7. 57
Iron.....	9. 62
Palladium.....	trace
Copper.....	trace
Metals of the platinum group.....	82. 81
	100. 00

The specific gravity of this platinum, simply isolated and freed from gold, was determined to be 17.5.

The region whence comes the platinum of Condado, municipality of Serro, Minas Geraes, is situated at the foot of the Itambe do Serro, whence flows the stream Bom Sucesso. A nugget of platinum the size of a nut was found in this locality, and after having been shown in the exposition of 1889 it was placed in the museum of the School of Mines of Ouro Prato. The bed of the little stream Bom Sucesso is formed of schistose quartz, with a strong dip; in some places this is traversed by formations of amphibolized diabase, precisely as occurs in the neighborhood of Diamantina. The minerals accompanying the platinum are also similar to those of that diamantiferous region, and may be classified as follows:

1. In the finest sands: A quantity of zircon, rolled, colorless, or partly pink; a great deal of oligiste and octahedra of magnetite; a number of fragments of black tourmaline; rare fragments of rutile; and crystals of monazite.

2. In the coarse sands: Rolled quartz in quantity, generally large pieces; fragments and aggregations of black tourmaline, the "feijão" of the miners of Diamantina; a considerable quantity of xenotime, as well prisms as octahedra; much hematite, oligiste, martite, and pyrite, but no anastase.

3. Very rarely there are also met with disthene, zircon, and colombite.

In view of the perfect conformity of the occurrences here and at Tijucal, Dr. Hussak attributes both to the same source, emphasizing the fact, however, that in no case can we think of a primary formation, such, for example, as a secretion from an eruptive basic rock, rocks with olivine and gabbro, since the forms of the platinum clearly indicate that we have to do with some secondary formation. Probably we have here a deposition of platinum in solution, derived from the decomposition of platiniferous pyrites, or of a combination similar to sperrylite, minerals originating from the schistose quartzes of the neighborhood, or from the upper conglomerate quartzes. The specific gravity of the Condado platinum, from specimens weighing 0.312,

0.267, and 0.2492 gram, is demonstrated to be 15 to 15.75, differing notably from that of the Tijucal platinum.¹

Among the various platinum localities of Brazil may be noted Gongo Secco, where it appears in the auriferous jacutinga, between the itabirites; the River Bruseasin in Pernambuco, in gold-bearing quartz among crystalline schists; the east side of the Espinhaço, from Itambé de Matta Dentro to Itambé da Serra, State of Minas Geraes, in the diamantiferous cascalho; the Abaeté River and its tributaries, where the deposits come mainly from olivine matrices; the veins of primary schist at Serro, Minas Geraes, and the alluvial deposits of the Matto Grosso rivers, State of Parahyba do Norte.² The wide dissemination and the varied character of the formations in which Brazilian platinum occurs would seem to preclude the advisability of confining the search for it to any one of a number of possible localities, and its discovery here or there will probably continue to be, as it has been in the past, dependent upon its recovery in the course of mining operations for other deposits.

A number of manuscripts, charts, and designs believed to contain some interesting and valuable information upon the platinum deposits in Brazil appear to be buried either in the archives of that country or in those of Austria. They represent the result of years of investigation pursued in Brazil by Virgil von Helmreichen, an Austrian mining engineer, who was occupied in this region from 1831 to 1851, during which period he traversed a wide extent of Brazilian territory. His long residence in the State of Minas Geraes coincided with the most brilliant epoch of the gold-mining industry—that of the exploitation of the subterranean mining in Gongo Secco, Cata Branca, Morro Velho, Itabira, and Condado—and it was while in the service of the English mining companies that he had an opportunity to make valuable observations regarding the deposits. The fact that most of these mines were later abandoned makes the loss of Von Helmreichen's notes especially regrettable. Many of the items were contained in a correspondence he carried on with Hocheder, the engineer and geologist of the English mines. Among the few papers by the Austrian engineer that have been preserved in print are "Reisebericht aus Minas Geraes von 6 Mai 1846," and "Ueber das geognostische Vorkommen der Diamanten und ihre Gewinnungs-Methoden auf Serra do Grão Mogol." This latter is one of the most excellent of the older contributions to the knowledge of these deposits.

On Helmreichen's death Wilhelm Heidinger, then president of the Vienna Academy of Sciences, caused his manuscripts to be sent

¹ Eugen Hussak "O Palladio e a Platina no Brazil," Port. trans. of Miguel Arrojado Ribeiro Lisboa and Manoel Arrojado Ribeiro Lisboa, *Annaes da Escola de Minas de Ouro Preto*, No. 8, 1906, pp. 167-169.

² J. C. Oakenfull, "Brazil in 1911," third annual ed., February, 1912, London, n. d., p. 293.

to Vienna to be deposited in the academy. However, when, in 1896, Prof. Suess, Heideringer's successor, made an examination of them, he discovered that precisely the geological portion referring to Brazil had disappeared, and he learned that this had been sent to the Brazilian consul at Dresden to be copied out. Shortly after this the consul died and all trace of the manuscript has been lost. It is believed, however, that there should still exist copies, made in Brazil before the originals were sent to Europe, but all efforts to find these in Brazilian archives have proved fruitless.¹

The existence of palladium and gold in the granite of Candonga, Minas Geraes, was already reported by W. J. Henwood, in 1875.² His details were almost exclusively derived from a manuscript of V. von Helmreichen, who had been active for many years in the mines of Minas Geraes. He noted that in the granite of Candonga there were disseminated sparsely grains of gold in a mixture of quartzite, feldspar, and magnetite. At times the auriferous rock entirely lost its granitic character, owing to the diminution of the quartz and the predominance of the magnetite. The particles of gold were irregularly distributed and formed an alloy containing from 5 to 8 per cent of palladium, the color being a yellow so light as to make the metal in some cases resemble native silver.

From these and other data furnished by Von Helmreichen, Dr. Hussak reaches the following conclusions:³

1. That the auriferous rock of Candonga forms deposits included in the itabirite which plays an important part in the formation of the Serra of the same name.

2. That these itabirites, as well as the auriferous deposits, are traversed by granitic veins, certainly outcrops of recent granite, which exists in the depths. Von Helmreichen states that granite was here observed even above the itabirite.

3. The gold was unequally distributed, sometimes appearing concentrated in clumps in a rock characterized by a yellow silicate (gehlenite); sometimes, however, this is lacking in gold.

4. That the gold of this deposit, as in all the deposits of the jacutinga of itabirites in Brazil, is marked by its relatively high-palladium content.³

In the Morro Velho mine at Villa Nova de Lima, Minas Geraes, Brazil, said to be the greatest gold producer in the State, there are many occurrences of what is locally called *ouro branco* (white gold), which consists of an alloy of gold and palladium. Although this

¹ Preface of Miguel Arrojado Ribeiro Lisboa to E. Hussak's "O Palladio e a Platina no Brazil," *Annaes da Escola de Minas de Ouro Preto*, No. 8, 1906, pp. 79-84.

² "Observations on metalliferous deposits," *Penzance*, 1871, vol. 1, p. 175.

³ Eugen Hussak, "O Palladio e a Platina no Brazil," *Port. trans. by Miguel A. R. Lisboa and Manoel A. R. Lisboa*, *Annaes da Escola de Minas de Ouro Preto*, No. 8, 1906, pp. 99-103.

met with in many places it is nowhere found in abundance. This mine is operated in a vein in the Piracicaba schist.¹

An altogether exceptional example of a platinum nugget was found in the Approuague River, French Guiana. An analysis of it by A. Daumer² gave platinum, 41.96; gold, 18.18; silver, 18.39; and copper, 20.56 per cent.

Although the gold used in making the following imitation coins scarcely came from Brazilian mines, their existence is a matter of some interest.

Counterfeit United States gold coins struck (never cast) in platinum, which was then plated with gold, have turned up at the Philadelphia mint from time to time. In some cases there was a small admixture of silver in the platinum, as this small quantity of silver would not reduce the weight unduly. The vicissitudes of metal values are illustrated in the experience of Mr. Eckfeldt, assayer at the mint, who last year sold a number of counterfeit eagles and half eagles he had collected in past years at a large profit. These pieces, dated in 1850, were of platinum gilded. That such pieces are still at large, though very rare, is proven by the recent detection, among the uncurrent gold coins sent in for recoinage to the Philadelphia mint, of a half eagle counterfeit in gilded platinum, dated in the sixties. This piece reached Philadelphia from the Chicago sub-treasury and had circulated for some years without detection. Of course it could now be sold for several times the value of the genuine gold coin.³

That this adulteration of the United States gold coinage with platinum was practiced in 1850 suggests that the platinum may have been found in connection with the gold-mining operations in California and Oregon. As the less valuable metal it may often have been thrown away by the miners who secured it or was sold very cheaply. The silver in these spurious coins may, of course, have been an impurity. However, silver was both cheaper and of lighter weight than platinum, and the admixture would bring down the weight of the composition to a close parity with that of gold.

¹ E. C. Herder and R. T. Chamberlain, "The Geology of Central Minas Geraes, Brazil;" reprinted for private circulation from "The Journal of Geology," Vol. XXIII, pt. II, No. 5, July-August, 1915, p. 412.

² Comptes Rendus of the Académie des Sciences, vol. 52, 1861, p. 682.

³ Communicated to the writer by Dr. T. L. Comparette, of the Philadelphia mint, in letter dated May 31, 1917.



EXPORTING TO LATIN AMERICA¹ .. " " " "

PART III.

Samples.—A salesman in Latin America should carry a broader and more complete line of samples than is ordinarily found necessary in the United States. The Latin American merchant does not like to buy without seeing the exact thing he is buying. He hesitates to accept the statement of the salesman, when the exact sample is not satisfactory, that something a little better at a higher price, or even something at a lower price, varying in this or that detail from the sample can be furnished. He wants to see samples of the full line of goods offered. He does not like to buy from photographic or other picture representations. In many cases he refuses to have anything to do with such. There are exceptions, but the above statements are true in the majority of cases. In making up a line of samples one should keep in mind that the Latin American buyer wants to see a sample of everything it is proposed to offer him, and if it be possible within reason to meet this view it should be met. Where it is not possible to do so and representations must be used more care should be taken in the preparation of the photographs and models. There should be more of them and more in detail, and on a larger scale. In machinery and large tools especially there should be fuller printed specifications.

In what is said it is not intended to convey the idea that there is any essential difference in the relation of samples to selling between the United States and Latin America. Good practice here is good practice there. But there are modifications due to distance from the supply market and unfamiliarity on the part of the purchaser with that market which must be considered. It is chiefly for this reason that the line of samples must be more complete. The case is the same as that of a New York salesman accustomed to traveling the Connecticut circuit being called to go to Colorado. The Colorado merchant, it is assumed, knows the Chicago supply market, styles, shapes, finish, etc., and does not know the New York market quite as well. The New York salesman must show his New York goods to the Colorado merchant to an extent he does not have to show the same goods to a Connecticut merchant. So the same salesman when he goes to Rio or to Buenos Aires must show the merchant there even more fully than he shows the man in Colorado, for in all prob-

¹ By William C. Wells, of Pan American Union Staff.

ability that merchant is accustomed to handling British, French, or German goods. Understand the buyer does not expect the goods to be the same as the European goods he has been handling, nor is there any need that they should be, but he wants to know what are the differences or what are the identities as the case may be. Differences may present advantages to him as great or even greater than identities, but he wants to see with his own eyes what they are. With time and better developed connections between buyers and sellers the need for large assortments of samples becomes less; although the new buyer will always demand the sample and the old buyer will want to see a sample of the new thing. Scarcely anyone reaches the point of being entirely satisfied with a picture or a description of something he has not seen and touched.

It will be recognized that these considerations have weight in the United States in the domestic trade. The difference is one of degree. Although the sample is more often needed in Latin American than in the domestic trade, the new exporter nearly always seems disposed to take the contrary view. Perhaps the reason for this lies in the well-known fact that the carrying of samples in Latin America is always a bothersome and sometimes an expensive matter. On this account one more or less naturally seeks to limit the line, the bulk, and the weight of samples. This inclination can not be safely followed.

Customs difficulties with samples.—One hesitates to write anything on the subject of the difficulties that the salesman encounters in Latin America in entering and clearing samples through the customs-houses, for nothing that can be said is likely to prove of much value to the man who for the first time has to encounter these difficulties. It is quite possible that he will find the trouble to be something different from what he has been told or is here told to expect. However, many years' observation of Latin American customhouse methods and a close acquaintance with the laws, regulations, and practices warrants the writer in saying that almost every difficulty the salesman may expect to encounter is due directly or indirectly to the disposition of customs officials to treat samples as ordinary imports. To be called on to pay regular duties in each country, when one contemplates using the samples for five or six countries, or after having entered the samples at one port to find that reshipment to another port in the same country entails a new entry and clearance, or to be threatened with fines and forfeitures because the entry is irregular (it is next to impossible to make such entries regular), presents an intolerable burden to the salesman. Whether or not he is able to avoid the demands or able to circumvent the difficulty if it be something else, depends upon his own skill and temperament, for there are no rules or formulas to be followed. The occasion makes

its own rule. He must keep his temper, not try to "bluff," not argue, answer all questions frankly, whether he sees they have any bearing on the matter or not, and above all keep to the job. Each of the 20 Latin American countries has more or less comprehensive laws and regulations differentiating samples from ordinary imports, but the writer does not believe that any digest or brief of these laws is likely to be of service to a new man. The regulations themselves admit of laxity and even greater laxity exists. The experienced salesman scarcely ever cites a customs law or regulation in his favor or answers directly the citation against him. What he does is to try to show his own good faith, and particularly that he has no purpose of selling his samples, but intends to take them away with him.

The truth is that the customs official and the salesman are looking at the matter from different angles. The laws are devised to meet a particular condition, and if the customs official believes that condition exists he is going to apply these laws to the exaction of the last farthing. But if, on the contrary, the official believes that condition does not exist, the salesman will be surprised with what liberality his samples are treated. The writer on numerous occasions has seen samples enough to stock a store admitted free without any difficulty whatever.

The writer believes that if it be possible to be of any assistance to a new man it is only by pointing out to him what is in the Latin American customs official mind and what the condition is that this official is trying to meet. If the salesman understands this other point of view and adjusts himself to it, is honestly what he pretends to be, and does not display bumptiousness, the chances are a hundred to one that he will have less trouble with his samples in any Latin American country than in any European country. But he must understand and be sympathetic to the point of view.

Primarily it is historical and regional. The Latin American official looks at every traveling salesman as being more or less a peddler or packman, and so he was originally and so he is yet in a large part of the world. We in the United States have lost sight of this fact, because here traveling salesmen (drummers) and peddlers may be sharply differentiated. Elsewhere they can not be, not even in England, where the peddler and the drummer (Anglice, bagman) shade one into the other and are often the same man. Most bagmen expect to sell their samples, their employers keeping them supplied with a constant flow of samples to meet this demand. Meanwhile the same bagman, like the American drummer, takes orders for direct delivery from his employer to customer. According to the trade and the corresponding weight and bulk of the samples the English bagman may be peddler or drummer or both. More than in England is this true in France and Germany, while in southern Europe it is

scarcely worth while to try to differentiate the peddler from the drummer; they are all one wherever it is practical to carry samples at all. Latin America is overrun with peddler-salesmen—Spaniards, Germans, French, Italians, English, but especially Syrians. These men are past masters in the art of getting their goods through the customhouses without paying duties. Latin American customs officials and Latin American lawmakers have had a century's experience with this kind of salesman and are not quick to believe that there is any other kind. Officials and lawmakers do not recognize that trade customs in the United States are so different from those of all the rest of the world that the salesman by samples may not be at times a salesman of samples.

Although in what has been said above the assumption is made that there is this clear-cut difference between the American drummer and the European bagman, the writer by no means holds to such a belief. The assumption is made in order that the salesman who in reality has no intention whatever of selling his samples, and who is inclined to resent any such suggestion, may see the other side of the matter and therefore be the better able to refrain from showing resentment or impatience toward the official who at the best has a difficult problem to handle. He should remember that every Latin American customhouse is defrauded of thousands of dollars every year by allowing free clearance to samples which never leave the country but which enter the customary channels of trade, and which in justice should pay duties and be otherwise treated as ordinary imports.

Qualities.—The impression is abroad that Latin America is a buyer of cheap goods; that it buys the low-priced and consequently low-quality thing, cheap clothing, cheap tools, cheap furniture, cheap everything. This is not true and could not be true, as all international traders will recognize, unless Latin America was an exception to the general rule controlling imports as applicable to non-manufacturing countries. This rule operates in all such countries against the low-priced and in favor of the high-priced commodities. Instead of Latin America being an exception to the general rule it is one of its best exponents.

Some who have recognized the fact have failed to see the reason why Latin America does not buy cheap qualities. It is not that Latin Americans in any marked degree love fine feathers more than other folks, or that they are more inclined toward practicing the higher economy of buying the good and serviceable rather than the cheap and unserviceable. It is that Latin Americans never get the chance to buy cheap goods at the comparative cheap price. They never will get this chance until the countries themselves develop manufacture on a scale comparable to that of England, the United States, and Germany, and then they will produce their own. Cheap

goods are ordinarily for sale only in the countries where they are produced, for the good and sufficient reason that the farther away one gets from the point of manufacture the more the price lines of the good and of the poor quality converge to the same point. Every added cost from the factory door to the consumer is the same, or nearly the same, for the \$1 article as it is for the \$5 article. The price relation of 5 to 1 at the beginning becomes 4 to 1, 3 to 1, 2 to 1, and finally but little more than 1 to 1, as the two articles travel alongside accumulating at every step each the same load of added cost to the man in Central Asia or the highlands of Bolivia. This man has not the choice that the man at the point of production has of saving 80 per cent on the price by accepting the low quality. His saving, even in such an extreme case as \$1 and \$5, may be only 20 per cent, and between the \$3 and the \$5 articles may be only 5 or 10 per cent. Countries as a rule import only luxuries and things they can not do without. Imported goods are high priced and high price acts as a constant drag toward high quality. Imports in Latin America as elsewhere are luxuries or things that Latin America must have.

We have said that the added costs from the factory to the consumer are approximately the same for the low priced as for the high priced. The only price advantage is that gained at the beginning (and perhaps insurance costs). The price advantage is, therefore, a constantly diminishing quantity, while the quality advantage is a constantly increasing quantity. Customs tariffs, contrary to what many Americans familiar with the operation of ad valorem tariffs only might think are not an exception to the general rule. Latin American tariff rates pull in the same direction as transportation rates, *i. e.* to favor high quality and high price as against low quality and low price. It is natural to expect under the United States tariff that a \$5 article will pay five, or even more than five, times as much duty as a \$1 article, and such is the general rule in the United States and in a limited number of other countries. But not so in Latin America. Latin American tariffs with very few exceptions are specific—so much per weight, per number, or per volume, and not so much per value. Even in Latin America when the tariff is per value (ad valorem) according to the letter of the law, it is not such in reality. For example, in Argentina pianos are in three classes—grand, baby grand, and upright—and in its class every piano pays the same duty. The law says the duty is 25 per cent ad valorem (there are some additional), but this duty is computed on a fixed valuation of 500 pesos for grand, 300 pesos for baby grand, and 150 pesos for upright pianos. In reality pianos pay a specific duty according to their shape in three classes and not according to their value.

The application of all of this is that it is a mistake to send poor quality to Latin America. Even where it is possible to build up a

business in low qualities, as it often is where the article is a new one and there is no competition, it is not good business because the foundation is unsafe. Later the better article comes into the market and then for reasons given above the poor quality has no standing.

Weights and measures.—In all the Latin American countries the metric system of measures is the only system in general use and the only one known to the great majority of people. Most importers, especially those importing from England and the United States, know English measures of weight and length, and among the people in general, but more particularly among the less educated classes, there is some acquaintance with a few old Spanish and Portuguese measures, at least by name. These are for the most part measures of land areas and volume measures of agricultural produce. But old measures, in Latin America or elsewhere, may be left entirely out of consideration in connection with foreign trade. Modern manufacture post-dates the introduction of metric measures, so that to-day all foreign trade in which measure is an essential or even a ponderable factor, no matter where or what that trade be, is based upon production and manufacture conforming to one of two scales—viz. English or metric. Latin America, along with France, Germany, Italy, and about all of continental Europe, has the metric, and the United States, with Great Britain and most of the English colonies and dependencies, has the English scale. The word English is of course used in its historical and not in its geographical sense, since in volume measures, quarts, bushels and their derivatives, England and the United States have different scales, and the United States has a whole series of weight-volume measures (so many pounds for a bushel of this, or so many for a barrel of that) and box, bale, crate, and other volume measures not used in England. So in England there are measures not used in the United States. In reality England, the United States, and the British colonies and dependencies are quite far apart in their measure systems, which as a whole are less systems than masses of incongruous and unrelated crudities derived from old Saxon, Venetian, and Byzantine sources (with an origin no doubt further back in Greece, Assyria, or Egypt), upon which in the United States have been grafted special absurdities. Nevertheless for England, most of the British colonies, and the United States measures of length and weight being the same or rather having the same bases, and weight and length being the most essential measure factors in manufacture and trade, it is quite feasible to speak of English measures as one when contrasted with metric measures.

The Latin American countries are not manufacturing countries, and this fact lies at the root of whatever confusion there may be in their international trade with respect to measures, since it permits the foreign manufacturer to dictate to a degree the kind of measure.

In a country, itself manufacturing and also importing, this is not true of any kind of imported goods, the like of which is manufactured in the country. If foreign manufacturers send their products to such a country they must send them in the measures used by the country itself in manufacturing. Thus England sends manufactures to France, Germany, Italy, etc., conforming to the metric scale, and these countries send goods to the English measure countries conforming to the English scale. These are old and well-understood practices which can not ordinarily be disregarded. It is only when a country has a monopoly in manufacture that it can afford to disregard the customs of those who buy its goods, or where the measure itself is a factor of no real consequence, as in bulk goods, coal, pig iron, wheat, and the like, or such manufactures as watches, clocks, axes, shovels, spades, where the completed article has little or no measure relation to its use or to any other and complementary article. But the Latin American countries willy-nilly must take what is offered. There is little or no domestic production such as there is in England, France, Germany, or the United States to exert a compelling pressure in forcing the foreign manufacturer to a use of the domestic system.

Latin America has its own measure system, which is metric, but it has no large manufacturing industry to act as an exponent to this system. The only pressure that can be brought effectively to bear upon the American and English manufacturer to force the use of the metric system in exports to Latin America is competition with French, German, and Italian rivals who use the same system as the Latin American does. The pressure is in the choice the Latin American has between the thing he knows and is accustomed to use and the thing he knows but little and is not accustomed to use. Whenever in fact such a choice exists naturally English measured goods suffer a handicap, provided always that they be of a kind where measure is of consequence. But in Latin America there is not always such a choice. England to a slight degree, but the United States to a very much larger, has had a monopoly in certain Latin American imports. Some of these imports are of goods where measure is of no consequence in selling, but some are of goods where measure is important. In this last class other basic factors of international trade such as control of supply of raw material, greater efficiency of manufacture, and of selling priority in the market, better transportation or financial connections, have overweighed the handicap of measure and created a monopoly in spite of the handicap. But the measure handicap is always there, even when the monopoly seems the most firmly established, and like a well-tempered coiled spring lies in wait to exert a full influence whenever the pressure of the other factors is released or becomes less. It is not safe to build too confidently upon

the fact that Latin America has always taken certain kinds of English measured goods without protest. It may be that Latin America may in the future itself manufacture such kinds of goods; and if so, it will assuredly use metric measures; or it may be that Germany, France, Belgium, or Italy may acquire greater efficiency or secure a better supply of raw material and enter the field; if so, the spring will uncoil.

The significance of measure to the purchaser and user is quite a different thing from its significance to the manufacturer. Because this is true it is possible most often to readjust the measure from the manufacturer's to the user's standard. We may differentiate a number of classes from the standpoint of the manufacturer and a number of different ones from the standpoint of the user. From the manufacturer's standpoint:

A. Includes those products which are dependent for their measure upon costly patterns, molds, forms, and tools, which can not be adjusted or altered for measure. In other words, measured products resultant from tool equipment where the manufacturer can not change the measure of the product except by scrapping the equipment and providing new equipment.

B. Includes products which are dependent as above, but where the equipment is not costly, or, if so, can be adjusted to measure without serious added cost or loss of time.

C. Includes products which are not dependent for their exact measure (at least in no large degree) upon the equipment but upon the workman or upon plans and specifications.

D. Includes products which are dependent for their measure upon the container used.

E. Includes products where there is no exact measure in manufacture, the measure being mainly quantity as viewed by the shipping clerk.

The above five classes shade more or less one into the other, but in the main they represent the different phases of measure as from the manufacturer's standpoint. It will be observed that these phases as classified have scarcely any relation to the user's standpoint. Products of class A, where exact measure is of supreme importance to the manufacturer and unchangeable, may be the same products in which exact measure is of little or no consequence to the user. This might be true of a clock, a lock, or a watch. Again, products of another class—C, for example—when the manufacturer is not tied to exact measure in manufacture, may be the ones where the user is so tied in use.

From the user's standpoint the classes are more in the nature of degrees than of class differentiation. In a sense measure, more or less exact, is always of consequence in some degree to the user. But this degree may vary according to the particular user, according

to the article itself, and according to any one of a number of uses. We may distinguish broadly the following classes:

X. Where exact measure is of little or no consequence to the user. This includes most bulk goods and complete apparatus and utensils which function without exact measure relation to other things. Coal, oil, foods (especially in bulk or in large containers), sewing machines, cash registers, watches, clocks, padlocks, furniture, some kinds of building material, agricultural and mining machinery, many other kinds of machinery, vehicles, ready-made clothing, boots, shoes, and trunks. The user in none of these things ordinarily requires exact measure, although the repair man may require it in some cases. The most that the user requires is that the measure be given in the familiar units.

Y. When exact measure is of some greater consequence to the user. This includes many of the things above when used for a particular purpose; most textile goods in the piece, in these the measure of width being the important one; building material partly finished, especially millwork; all machinery, tools, equipment, and utensils which function in partial measure relation to other things; locks, as to exterior dimensions, builders' hardware, canned and bottled goods. In all of these the want of exact metric measure is a handicap in some degree which can not be overcome entirely by giving the measure in the familiar metric unit.

Z. When the want of exact metric measure excludes the product or lays upon it a handicap too heavy to be overcome by any favorable condition whatever. This is a small class, including, generally pipe fittings, precision tools, empty containers for domestic products, repair parts for metric machinery, apparatus, and utensils; some kinds of machinery and railway supplies, ornamentation and furnishings; in broad, anything where the measure must be exact and metric, because the use so demands.

In view of what is said above it should not be difficult for any prospective exporter to know just how far it is necessary for him to go in adjusting his measures to Latin American trade. Labeling in metric measures without any change in manufacturing practice suffices in many cases, and slight changes when such are permissible will suffice in many more. The real difficulty is where class A above connects with class Z. In such cases the exporter must choose between new factory equipment and the relinquishment of the trade, unless the trade fall in the class mentioned above of monopolies, where the Latin American must buy English measured goods because no metric measure country is able to supply him with them. In most other cases the difficulties are in reality not great and can be overcome at trifling expense.

Packing.—The constant prodding of American exporters for bad packing to Latin America has a certain amount of justification if

such prodding were only less general in its scope and less insistent that the fault is one common to Americans only. The latter is by no means true, for unquestionably the best packing that goes to Latin America is from the United States. Bad packing is because of inexperience; it is the beginner's mistake, from which the experienced exporter, be he English, French, German, or American, is more or less free. For the last dozen or so years, and especially since the beginning of the war, there have been more American beginners than any other and consequently more American bad packing. Had the condition been reversed no doubt the bad packing would have come from Europe, and much of it does. Experienced American exporters, as a class, pack well for the Latin American trade, as a rule better than English and French and much better than German.

There are several factors to be taken into consideration in packing, and often it is necessary to strike a balance between conflicting factors. The fault of German packing has been that this balance was scarcely ever struck or attempted, the result being that the more important factor was sometime sacrificed to the less important.

Particular rules for packing in general are not worth much, but more or less a general grouping of pertinent facts can be made which will give the beginner an insight into what is required for good packing in many if not in most cases.

This grouping takes into account five factors: (1) Safety; (2) convenience of handling and freight rates; (3) tariff law tare allowances; (4) relative value of goods; (5) cost of container to exporter and value of container at destination.

In order to constitute good packing it is sometimes necessary to strike a balance between two or more of the above factors when they operate, as they frequently do, in conflict.

1. Safety is the point toward which most criticism of American packing methods has been directed, and it is not to be denied that the use of insecure and insufficiently protective packing is the most common fault of all beginners. One does not have to seek far for the cause of this. Railway transportation is about the only kind the domestic trader is familiar with, and such transportation admits of slight and rather insecure packing. He does not know that railway handling at its worst is very gentle as compared with steamship handling. The unlading of packages to railway platforms or even to the ground is quite a different proposition from unlading ships in Latin-American ports. The steam winch is by no means so kind a tool as the hand truck, and a drop of 40 feet onto a lighter requires something in the way of boxing much stronger than a drop of 4 feet to the ground. The jolts and jars the packages get when the railway train takes a curve or comes to a sudden stop are slight in comparison with what goes on in the hold of a ship at sea in a storm. Stenciled notices "This side up," "Handle with care,"

and "Place nothing on top," may as well be left off of packages intended for ocean carriage. Your frail box is just as likely as not to be in the ship under 10 or 20 tons of hammering weight, and be unladen in a big net, with a jumble of 50 other packages, that comes down on the wharf with quite a thump. Small packages are more or less scooped out of a ship's hold like coal from a dumping wagon, everything comes tumbling, by means of steam-operated devices, pell-mell, helter-skelter. Ship carriage is necessarily rough carriage, for which the ship is in no way responsible, but unquestionably it is much rougher than it should be. The radically different bases in law of carrier's liability for damage at sea and on land, as administered at common law and in admiralty, in effect enables the sea carrier to escape all liability resulting from rough handling. This condition more or less forces, or at least it encourages, the Latin-American importer, whose goods are damaged in transit, to lay his claim for damage against the foreign exporter, alleging insecure packing. In all fairness many of these claims should be against the steamship company for unnecessarily rough handling. "Reasonable care" in no event would be interpreted by the courts to mean the same kind of handling and storing at sea and on land, for the former is necessarily much more destructive than the latter, but there is no good reason why reasonable care should not be exercised by both classes of carriers.

One must understand, therefore, that, considering the rougher handling of sea-borne than land-borne trade, he must pack stronger and more securely; where he has used half-inch boarding he must use inch stuff, and where inch, $1\frac{1}{2}$ inch or 2 inch; that boxes should almost always be strapped, the larger and heavier with stout inch or $1\frac{1}{4}$ inch strapping; that the boards must be clear or first grade and ordinarily matched; that crates must be of heavier stuff, strapped and braced every way; that unboxed or uncased goods, if the surfaces are liable to be injured, must be completely covered with good burlap, or the equivalent, well sewed over excelsior or paper. The above are only a few hints and necessarily applicable in only a few cases. The best rule is to keep in mind what is said above about unlading in Latin-American ports and to devise a kind of packing suitable for the particular article which will resist this kind of usage, remembering that packing for sea carriage must be protective from strains or blows from all directions, for the package is as apt to go upside-down as any other way.

There are differences in manner of handling freight in the several Latin-American ports which experienced exporters take into account in the manner of packing. To insure safety, packing for some ports should be stouter and stronger than it needs to be for others. Uniformity among steamship lines, or among ships of the same line, as to the degree of care exercised in handling and storing freight

unfortunately does not exist, although it is not to such lack of uniformity that reference is here made, but to differences relating to port facilities and the degree the same are used in unloading ships. Unloading to lighters, perhaps miles out at sea, is almost always much rougher work than unloading to docks in harbor. One could classify Latin-American ports as to whether there are, or are not, docks at which ocean-going ships may discharge; but since much unloading is done by lighter, even at ports—for example, Rio, where there are very excellent docks—the classification would not be of much value as a determining factor in packing. With the ship company it is a question of expense, so if the vessel can be unloaded cheaper by lighter than by paying dock fees the lighter is used. At Rio, Montevideo, and other ports much unloading is done by lighter, which if the safety of the cargo were the chief consideration would be done at the docks. Ships are generally unloaded at docks along the north coast of South America and at most ports of the West Indies and at Buenos Aires and other ports in Argentina, and at Santos in Brazil. They may or may not be unloaded at the docks in other ports on the east coast of South America. Ships are scarcely ever unloaded at docks anywhere on the west coast from Mexico to Chile. In addition the harbors on the west coast are not so good as on the east. Much of the unloading on the west coast—for example, at Mollendo—is practically unloading at sea.

From these general observations one can say that all west coast packing must be stronger and stouter than east coast packing; that packing for the West Indies and the north coast of South America—La Guayra, Puerto Cabello, Cartagena, etc.—can be less strong than packing for any other sections of Latin America. Indeed, packing for these last-mentioned localities should be about the same as packing for Liverpool, Bremen, and other protected European ports, where unloading is customarily at the docks.

2. The subject of convenience of handling and freight rates as touching packing is upon a somewhat different basis for sea than for land carriage. Large and heavy packages can be handled more conveniently on and off ships than on and off railway cars, so that where transportation to the export wharves is convenient and where there are no difficulties arising from reshipment on railways at the port of destination, larger and heavier packages are available for export than for the domestic trade. Railway freights are computed by weights applicable to the several classes into which all goods are divided. This classification takes account of bulk, value and liability to injury, and the weight rates of the classes vary accordingly. Sea freights are classified on entirely different basis and the ship generally exercises the privilege of charging by bulk or by weight as it may elect. Most often it elects, in cases of miscellaneous cargo, to charge by bulk. Compactness is, therefore, the object to be aimed at in

export packing and this is the reason why one big case is ordinarily a freight saver as compared with three or four small cases carrying the same amount of goods.

3. The question of tare allowance in tariff import laws is one that only occasionally and in a few localities touches the matter of packing, but in such cases it may have a very considerable bearing. Nearly all Latin American tariff rates are specific as distinguished from *ad valorem* rates—that is, the basis of the customs import is quantity, either number, volume, or weight, and not value. It is not necessary in treating of packing to consider any other customs import basis except that of weight, and not even weight in such countries as Argentina, Uruguay, Paraguay, Bolivia, Chile, Brazil, and others where tare allowances are in general adequately made. The application of the tariff to packing relates to the Central American countries, except Panama, to Colombia, Peru (in a degree), but especially to Venezuela. In the latter country the general basis is by weight, with little or no tare allowance. In all the countries last mentioned it is good practice to keep the weights of packing as low as is consistent with other considerations, the chief being safety. Whenever a lighter can be substituted for a heavier packing without sacrifice, even though at a higher cost, it is generally best to make the substitution. Metal containers can sometimes be substituted for wooden and thereby a gain made in weight without a loss in strength; sometimes it is the other way. Many articles can be safely baled with burlap coverings where wooden boxes are now used. Interior containers that add nothing to packing strength can be made lighter or omitted and the exterior cases can be selected with a fuller appreciation of the necessity of combining lightness with strength. In some cases it is good practice to take a little risk on safety in order to gain in weight. This might well occur in the classes 5 to 9 under the Venezuelan tariff, where the rates run from 18 cents to \$2.74 per pound. Fortunately the principal Venezuelan ports—a fact also true of the Central American and Colombian ports—are docking ports, where the handling in general is not so rough.

4. The relative value of goods frequently determines the amount of security which should be given by the packing, it may also determine the cost of the packing. Where a balance is to be made between the tare factor treated of above and safety it is generally worth while to take in the third factor of value. For example: Class 9 of the Venezuelan tariff makes goods thereunder dutiable at the rate of 20 bolivars per kilo. With surtaxes this rate is increased to 31.31 bolivars per kilo (\$2.74 per pound). Even at this rate it would not be good practice in shipping diamonds, jewelry, gold watches, etc., to stint in packing to any extent that might render the goods less secure from injury: but boots and shoes, bookbindings, and some kinds of ready-made clothing are also in class 9 and pay the same

rates of duty by weight as do diamonds and gold watches. Manifestly it would be good practice to pack watches and like goods without special thought to the weight of the packing, since no matter how heavy, in reason, the packing may be, the duty paid thereon would be but a very small per cent of the value of the goods, and so would add but little to their cost. It is otherwise when the importer is called on to pay \$2.74 a pound duty for the containers of goods of relatively low values, like boots, shoes, bookbindings, and ready-made clothing, or \$1.37 a pound (class 8) for shirts, suspenders, handkerchiefs, and unmanufactured tobacco. Overpacking for Venezuela would add materially to the cost of such goods. Even the kind of packing one should use for Argentina, Chile, Uruguay, or Brazil would have the same result. Balancing all the factors, underpacking in many cases would be good packing.

5. Cost of container to exporter. Value of container at destination.

The general rule in export trade is to charge for the container, the general rule in domestic trade is to the contrary. In the former trade the purchaser expects to pay the full cost of packings, but he expects skill in packing on the part of the exporter. He is buying packing along with the goods, and expects all the factors which affect his interest to be taken care of in a reasonable and skillful way. To be a skilled packer for the Latin American market it is not enough to consider the factor of safety alone. Strong metal lined and strapped shipping cases by no means tell the whole story of good packing. That was the mistake the Germans frequently made, and that was the error the really skillful packers, mostly American, very seldom made.

A factor which the Latin American purchaser nearly always takes into consideration as touching the charge made to him for packing is the sale value of the disused container. Most disused containers in the United States go into the furnace or the trash pile, very few ever reach such destinations in Latin America. They nearly all have an economic use and sell for a good price, and even where the box, case, can, or other container is not of use as such, the boards, sheets, and other material will bring more than the cost of the container at the place where it was made.

Skilled packing is an art, subject to an almost infinite number of rules and conditions. It can not be taught in general phrases and trite maxims. It takes into account not only the protection of the goods, but the protection of the other interests of the purchaser of the goods from the time they leave the seller until they reach their final destination, and even beyond, for it takes into account the salvage from packing material. Skilled packing is a price element in selling, and is itself one of the best salesmen that sails to the Spanish Main.

PRESIDENTIAL INAUGURATION IN SALVADOR

On March 1 last Señor Don Jorge Meléndez, elected to the presidency by a majority vote of the citizens of the Republic of Salvador, was inaugurated into office for the coming constitutional term. The new president has long borne an enviable reputation as an upright and honorable business man with marked executive ability, and with his conciliatory spirit and open mind his administration of the high office to which he has been elected will doubtless be successful in a high degree.

The inaugural ceremonies were held at a session of the National Legislative Assembly in the Blue Room (Salón Azul) of the National Palace in San Salvador. The President elect was accompanied by the retiring President, Dr. Alfonso Quiñónez Molina, and having taken the oath, received the usual insignia of office.

President Meléndez then read his inaugural address, in which he was frequently interrupted by enthusiastic acclamations from the audience. The message explained his political program, in which patriotic zeal and desire for the common good is revealed throughout. Especially noteworthy are the following excerpts, which set forth his ideals for fraternity and unity of purpose upon the American continents:

By cherished traditions, which my Government will strive to maintain, Salvador must be considered a distinct unit of the old Central American nation. Consequently, her relation to other Isthmian States will be based not upon cold diplomatic formulas but upon a spiritual communion of ideas, strengthened continually by mutual esteem and reciprocal sympathy.

The judicial bonds created in 1907 by the treaty of Washington having been severed, the growing necessity for strengthening and enlarging the common and international interests of the sister republics of Central America is manifest, and the governments should give thought to the reestablishment of such common ties, not perhaps in identical terms but in measures that will meet the changing conditions and great problems confronting Central Americans in the light of the spirit of cooperation which prevails in the world to-day.

Let us look to Spanish America, and zealously cultivate political, moral, and intellectual relations with the countries that are akin to ours and which, by virtue of their progress and by their pronounced and practical republicanism, have been so potent in shaping the destiny of this continent. May a new current of interrelation and sympathy, added to those already established, open a wider horizon to our policies and place us in a position to cooperate, if only to a limited extent, in the work of union and solidarity to which Hispano-Americans aspire.

Toward the powerful northern democracy which, under the wise and clear-sighted guidance of President Wilson, has pointed to the world the new course which will



SR. DON JORGE MELÉNDEZ, PRESIDENT OF THE REPUBLIC OF SALVADOR.

Sr. Don Jorge Meléndez was inaugurated as President of the Republic of Salvador on March 1, 1919, for the constitutional term 1919-1923. President Meléndez was born in the city of San Salvador April 15, 1871. A man of vast energy, he has contributed much to the material progress of his country. In his political career he has been notable for his liberality, integrity, and democratic spirit.



DR. ALFONSO QUINÓNEZ MOLINA, VICE-PRESIDENT OF SALVADOR.

Born in 1873, Dr. Quinónez Molina has been one of the most prominent figures in the political and intellectual life of his country. Noted as an eminent physician, he has also held very responsible positions in political and diplomatic branches of the Government, having just completed a term as Vice President of the Republic, to which office he was again elected for the term beginning March 1, 1919.



INAUGURATION DAY FESTIVITIES, SAN SALVADOR, SALVADOR.

Upper picture: The Diplomatic Corps and prominent Salvadorean officials leaving the capitol after attending the inauguration ceremonies. Lower picture: Inaugural procession showing (1) President Don Jorge Meléndez and (2) Vice President Dr. Alfonso Quirón Molina.



INAUGURAL PROCESSION, SAN SALVADOR, SALVADOR.

The inaugural procession leaving the National Palace after the ceremonies, March 1, 1919.

lead to a just and stable peace, based upon fraternity and justice, my government will have nothing other than sentiments of adhesion and feelings of sympathy and accord, inspired by our national conscience after having seen that noble nation converted into a disinterested defender of weaker nations and its President into the armed knight of the democratic ideal, acclaimed the leader of humanity.

At the conclusion of the ceremonies President Meléndez received the congratulations of the diplomatic corps and attended the Te Deum in the Santa Iglesia Cathedral of the capital.

OLAVO BILAC



OLAVO BILAC, Brazil's great poet, writer, orator, and educator, died in Rio de Janeiro on December 28, 1918. In his own country he was generally accorded the title of "Prince of Brazilian poets," his genius having been recognized as preeminent even in such a brilliant galaxy of poetical writers as that country has produced.

Although primarily a poet and literateur, Bilac took a lively interest in many more prosaic activities. Early in his career he became connected with the public press, first as a contributor and subsequently as coeditor of one of the leading political journals of the country. While yet a very young man he joined with that great statesman and diplomatist, Joaquim Nabuco, and other contemporary leaders of thought in the great struggle which culminated in 1888 in the abolition of slavery in Brazil, and in the year following took an active part in the establishment of the Republic.

In educational matters Olavo Bilac's work was constructive and productive of lasting results. For many years he held the office of inspector of schools in Rio de Janeiro, arousing the interest and enthusiasm of the young generation by his forceful and eloquent lectures, and contributing much of his time and labor in the preparation of a series of school readers which have become standard throughout the country.

In the field of international relations Bilac's ardent participation in the Pan American movement entitles him to the special regard of all those who are seeking to promote the spirit of cordiality and real friendship among the peoples of all the Americas. He was the Brazilian secretary of the Third Pan American Conference, held in Rio de Janeiro in 1906, where he was also, incidentally, the interpreter of the speech delivered before the conference by Hon. Elihu Root, then Secretary of State of the United States. In 1910 he was a member of



OLAVO BILAC.

the Fourth Pan American Conference, held in Buenos Aires, being one of the Brazilian delegates and rendering in that capacity a memorable service to the cause of Pan Americanism.

In his poetical works Bilac always sought the ideal of perfection, never yielding to the demands of fads or fashions unless these conformed to the basic laws of real poetry. Nothing of the uncouth, prosaic, or frivolous is to be found in his works. He wrote on many practical things in prose, but these matters, however important for the time being, were rigidly excluded from his poetical contributions to the literature of his country. Even in his didactic compositions he never lost sight of the classical purity which characterizes all of his verse. An instance of this may be cited in his "Hymno da Bandeira" (Hymn to the Flag), so dear to the heart of every Brazilian. Incidentally, the singing of this hymn by a group of Washington girls on the occasion of the Fourth of July celebration last year on the esplanade of the Pan American Union, was a touching tribute to the great Pan American poet as well as to his beloved country.

Born on December 16, 1865, a ripe scholar and profound student of all great human problems, member of the Brazilian Academy of Letters and of many other learned societies, an orator who could sway great audiences by his eloquence, Bilac had practically just entered upon what doubtless would have proven the greatest period of his life when death claimed him. In his passing his native land has lost perhaps the brightest of its literary stars, one of its greatest patriots, and one of its most beloved sons; the cause of Pan Americanism has lost from its ranks one of its most powerful advocates and friends; and all America joins Brazil in mourning the distinguished dead.



FOREIGN TRADE OF CHILE

FOR 1917

The foreign trade of Chile for the year 1917 shows a remarkably large increase over the trade of the preceding year, both in imports and exports, and as appears from the tables below shows also a large increase over prewar trade of 1913.

For 1917 the total of imports was 355,077,027 pesos gold (\$129,603,115), and of exports, 712,289,028 pesos (\$259,985,495).

IMPORTS.

[Values in United States gold.]

	1913	1914	1915	1916	1917
United States.....	\$20,089,158	\$20,148,576	\$18,638,455	\$34,458,956	\$63,534,755
United Kingdom.....	36,109,211	22,309,086	13,288,603	20,049,544	23,565,591
Peru.....	4,810,376	5,380,220	4,762,542	5,596,427	10,176,271
Argentina.....	3,262,654	2,164,939	2,456,681	2,513,181	7,682,106
India.....	3,187,043	1,979,472	2,768,640	4,551,094	5,340,834
France.....	6,623,260	4,206,107	1,700,383	3,462,373	5,152,006
Spain.....	1,135,883	905,684	737,992	2,032,746	3,251,281
Mexico.....	231	3,386	267,288	477,320	2,454,068
Italy.....	3,176,284	1,976,513	1,732,890	1,752,203	1,652,123
Japan.....	141,154	94,491	349,931	590,169	1,193,282
Brazil.....	971,917	725,975	1,180,948	1,133,853	863,257
Sweden.....	30,408	23,711	492,239	717,047	799,834
Bolivia.....	53,525	124,014	101,997	199,478	659,463
Ecuador.....	452,415	449,409	432,328	237,955	620,671
Australia.....	3,343,832	6,269,379	1,203,806	453,565	418,062
Cuba.....	188,929	169,821	196,629	327,929	415,286
Switzerland.....	192,801	135,931	76,263	203,075	252,766
Panama.....	49,197	9,359	33,694	30,986	237,125
Norway.....	49,848	153,828	346,746	540,602	294,317
Uruguay.....	635,766	528,083	291,672	183,588	219,817
Denmark.....	3,889	24,427	440,347	440,098	204,872
China.....	103,944	66,478	63,644	101,290	118,554
Netherlands.....	67,211	200,466	162,076	351,312	116,163
Guatemala.....	62,781	48,525	9,433	46,528	67,718
Germany.....	29,578,138	25,889,771	3,583,589	452,638	67,527
Portugal.....	146,111	104,370	50,806	94,146	34,436
Belgium.....	5,671,427	4,151,372	405,615	67,331	3,970
Austria-Hungary.....	14,225	20,587	7,717	522	2,270
Other countries.....	122,383	197,215	139,264	154,056	204,690
Total.....	120,274,001	98,461,195	55,922,218	81,220,102	129,603,115

The Chilean imports representing increases in 1917 were: Beef cattle from Argentina to the value of 4,636,188 pesos; rice, 19,000 metric tons, nearly all from the United States, Peru, and Japan; sugar, 20,998 tons, practically all from Peru. A considerable part of this sugar was reexported to Argentina. Textile piece goods, 60,336,521 pesos, of which a little over one-half from the United Kingdom, and about 12,500,000 pesos worth from the United States; the remainder from Spain, France, and Italy principally. Iron and steel goods, especially bars and sheets, machinery, and manufactures, principally from the United States. Railway and tramway materials, especially steel rails, 9,340,842 pesos, between 80 and 90 per

cent from the United States. Automobiles, 9,014,658 pesos, 95 per cent from the United States.

EXPORTS.

[Values in United States gold.]

	1913	1914	1915	1916	1917
United States.....	\$30,413,386	\$31,434,241	\$50,199,243	\$92,033,567	\$155,006,103
United Kingdom.....	55,548,341	40,041,307	40,582,411	48,146,599	55,388,670
France.....	8,847,885	4,245,128	3,554,092	14,088,459	11,657,554
Argentina.....	1,034,881	1,511,508	3,509,474	4,491,903	8,517,479
Italy.....	652,032	738,493	1,708,846	1,885,652	4,799,089
Japan.....	1,333,481	823,498	1,779,629	1,408,876	3,643,100
Bolivia.....	547,274	289,715	172,598	757,086	3,136,612
Netherlands.....	4,470,103	3,290,996	1,443,628	2,415,233	2,764,480
Java.....	.....	.....	.....	.....	2,580,180
Polynesia.....	.....	.....	926,699	1,393,348	1,696,595
Spain.....	987,174	3,376	1,610,520	1,566,736	1,570,057
Peru.....	933,297	356,882	253,095	942,076	1,560,502
Australia.....	22	154,778	1,971,569	1,177,787	1,333,390
Egypt.....	410,506	1,041,704	2,388,234	329,902	1,231,407
Denmark.....	.....	508,642	1,517,897	1,419,295	659,800
Brazil.....	525,267	151,829	8,159	28,284	481,234
Cape Colony.....	.....	.....	523,976	.....	467,857
Canada.....	.....	106,194	46,684	371,763	199,173
Uruguay.....	424,037	234,379	141,568	30,738	116,210
Panama.....	34,059	61,550	96,667	46,045	61,952
Sweden.....	.....	832,450	397,075	859,404	11
Russia.....	.....	.....	1,827,425	6,971,695	.....
Germany.....	30,772,743	18,078,986	.....	.....	.....
Norway.....	.....	.....	128,265	.....	.....
China.....	43,891	.....	.....	.....	.....
Mexico.....	105,055	22,797	.....	.....	.....
Belgium.....	5,674,869	3,444,558	.....	.....	.....
Portugal.....	657	.....	700,916	192,002	.....
Other countries.....	42,517	54,302	125,775	65,044	1,215,160
Foreign merchandise exported.....	1,851,735	1,954,221	1,923,528	2,781,967	(1)
On orders.....	.....	.....	2,011,919	4,054,971	1,896,880
Total.....	144,653,312	109,381,534	119,529,892	187,458,432	259,985,495

¹ \$3,191,894, classified as follows and included in the above totals: United Kingdom, \$119,475; United States, \$62,641; France, \$14,298; Argentina, \$940,270; Bolivia, \$1,683,602; Peru, \$294,542; Brazil, \$44,285; Japan, \$5,642; Panama, \$399; Italy, \$3,665; other countries, \$23,075.

The foregoing table shows some rather remarkable changes in position as to several of the minor countries of export, noticeably Denmark, of the Scandinavian countries, Portugal, Russia, Java, Cape Colony, and Egypt. All of these changes were due almost exclusively to shifting in destinations of nitrate exports during the war. This shifting was an indirect result of the war. The more direct result of the war is shown in the entire cessation of exports to Germany and Belgium after 1914.

Although there was an increase of 138,800,000 pesos in the value of nitrate exports in 1917, as compared with the preceding year, there was an actual decrease of 1,688,058 metric quintals (quintal=220.46 pounds) in quantity. The United States increased its takings of nitrate to more than one-half of the total exportation, 16,000,000 quintals out of 27,978,719 quintals.

Of agricultural exports the principal increase was in the legumes (beans, peas, etc.). The total export of legumes amounted to 17,750,719 pesos, of which nearly 11,000,000 pesos was to the United States. This is principally represented by frijoles. The export of sugar to Argentina was 3,580 tons.

PAN AMERICAN NOTES

ECONOMIC SURVEY OF THE REPUBLIC OF PANAMA.

DR. CLARENCE J. OWENS, Director General of the Southern Commercial Congress, has been called by President Belisario Porras to the Republic of Panama to direct a survey of that Republic with a view of solving the internal economic problems of the country, with especial reference to agricultural finance.

Upon the recommendation of President Porras, the Congress of Panama recently passed a law empowering the President to invite Dr. Owens to direct the important task. Dr. Owens has been granted leave of absence from the Southern Commercial Congress in order to undertake this vital step in practical Pan Americanism. He is empowered to select a staff of experts to accompany him, and will likely begin the work in May.

This high honor conferred upon Dr. Owens is based upon his work along similar lines in the United States. He was appointed by President Wilson in 1913 as a member of the United States Commission on Rural Finance, and he served also as the Director General of the American Commission with which the United States Commission cooperated, in the survey of agricultural organization in eighteen countries of Europe. Based upon this evidence, the Federal Farm Loan Act was passed by Congress and approved by the President July 17, 1916.

As is well known, the Federal Farm Loan Act has to a considerable degree financed American agriculture and rendered a vital service during the world war, for the law makes liquid forty billions of wealth and makes an acre of land the basis of credit for a long-time mortgage loan at a low rate of interest and on the amortization plan. There are approximately four thousand farm loan associations in the United States operating under the law, and more than two hundred millions of dollars have been loaned to date by the twelve great regional banks, and the system is still in its infancy.

Dr. Owens is often referred to as the "Father of the Federal Farm Loan System," since he assembled the American Commission from 36 States and 5 Canadian Provinces for the European survey; secured the incorporation of a plank in the platforms of the great political parties approving the adoption of the system; prepared the initial literature published by the Government on the subject; had the privilege from President Wilson of nominating his six associates on the United States Commission; prepared the joint resolution unanimously adopted by the Congress of the United States, invoking



Photograph by G. V. Buck, Washington, D. C.

DR. CLARENCE J. OWENS, DIRECTOR GENERAL OF THE SOUTHERN COMMERCIAL CONGRESS.

Dr. Owens has recently been called by President Porras to the Republic of Panama to direct an agricultural survey of that country.

diplomatic recognition for the Commission; personally directed the survey of investigation in America; and as a member of the United States Commission aided in the preparation of the law.

President Porras has in contemplation a similar law for the Republic of Panama, according to a statement by Acting Minister Lefevre. Mr. Lefevre also stated that Dr. Owens is no stranger to Latin American problems and achievements. Dr. Owens, he said, conducted a trade commission to Latin America in 1913 and was the guest of the Panaman Government. He published the book by William A. Reid, "The Young Man's Chances in South and Central America," and arranged for the initial program at the Pan American Union for the inauguration of the work of preventive medicine for the Rockefeller Foundation in Latin America. He also conducted the Congress at Mobile, Ala., in 1913, attended by President Wilson, and made notable by the President's declaration as to Latin America, an address that has strengthened the unity of the Western Hemisphere.

AVIATION IN SOUTH AMERICA.

In previous numbers the BULLETIN has published information concerning projects which are under discussion for the establishment of regular airship service in various South American countries. From Brazil, Chile, and Colombia data have been received which demonstrate the decided interest being taken in the matter in those countries at present.

The Handley-Page Co. has offered to establish a service between Pernambuco, Rio de Janeiro, and Rio Grande do Sul, with an extension to Buenos Aires. This system would form the South American section of a projected trans-Atlantic service, linking Europe and the New World.

The Italian firm of Caproni also is treating with South American countries, one of its important proposals—all of a far-reaching character—including no less than a regular service between Chile and Genoa.

The minister of Chile in London, Señor don Agustín Edwards, has communicated to the Government of Chile the terms of an offer, emanating from the English firm of Vickers, relative to the establishment of a service of aero navigation in Chile. According to the account in the South Pacific Mail, the terms of the offer, in condensed form, are as follows:

1. The establishment of a small aerial transport company with a capital sufficient to acquire six hydroplanes and six aeroplanes, to transport correspondence, passengers, and merchandise between the coast ports and interior towns. Later, when this service has taken

root and demonstrated its commercial utility, other developments may result, such as the building of machines and establishing a school of aviation.

2. The characteristics of the hydroplanes would be as follows: Distance, 400 kilometers: Time, 3 hours; cargo capacity, 2,700 kilograms, or 30 passengers. Distance, 1,600 kilometers: Time, 12 hours; capacity, 1,360 kilos, or 15 passengers.

The capital necessary to acquire these machines would be approximately \$500,000, and also about \$400,000 for cost of exploitation for one year. If there was charged 0.31 peso gold per kilometer per passenger and 0.83 peso gold per kilometer per ton of cargo, and if each machine flew during 750 hours per year, a turnover of \$750,000 per annum could be calculated upon.

3. The characteristics of the aeroplanes would be—capacity to carry 10 passengers or 1,360 kilos of cargo a distance of 850 kilometers (500 miles) at least, with a velocity of 129 kilometers (80 miles per hour). The capital necessary to purchase the machines would be \$300,000; costs in one year, \$300,000. It is estimated that the turnover would be \$600,000.

To demonstrate the economy of time that would result from such a system the following examples are cited: The trip from Valparaiso to Santiago (a distance of 100 kilometers in a straight line and 183 by rail) would take 46 minutes and cost every passenger 31 pesos gold and 80 pesos gold per ton of cargo. The voyage from Punta Arenas to Puerto Montt (1,300 kilometers in a straight line) would last 12 hours and cost 400 pesos gold per passenger and 1,000 pesos gold per ton of cargo. From Los Andes to Santiago (70 kilometers in a straight line and 140 by rail) the trip would take only 35 minutes and cost 21 pesos per passenger and 58 gold per ton of cargo. From Los Andes to Valparaiso (79 kilometers in a straight line and 131 by rail) the cost and time would approximate that given for the trip between Los Andes and Santiago. It will be noticed that the transportation of correspondence would be especially advantageous in this and the former case.

According to a report of United States Consul Claude E. Guyant, of Barranquilla, the Colombian Government is considering a project for contract submitted by Handley-Page Co. and Urquhart, Carvalho & Co. of London. The basis of the contract, as announced, is to be as follows:

The contractors are to establish a semiweekly service between Bogotá and either Barranquilla or Cartagena on the coast, and a weekly service between Manizales, Medellín, and either Barranquilla or Cartagena. Mail shall be delivered at destination 24 hours after having been received by the transporting company. The preliminary work, including meteorological studies, etc., shall be com-

menced within six months after the signing of the contract, and the service shall be established not later than one year after the signing of the contract, the duration of which shall be 10 years, and the contractors are to have the right of preference in contracting for all aerial transportation service in the Republic. The Government is to pay 25 cents per kilogram for correspondence, 15 cents per kilo for postal packages, and, in addition, 2 cents for each letter and 25 cents for each package. The weight of packages is limited to 5 kilos (11.02 pounds).

Since the Colombian Government had already received three offers for the establishment of a similar service, and close competition is the probable result, bids for airplane mail service will probably be received from various foreign companies according to an announcement of the minister of state of Colombia.

HOPKINS MEN TO EXPLORE ANDES.

The following account of an expedition to explore the geology and mineral resources of the Central Andes in Peru and Bolivia is taken from The Johns Hopkins News-Letter:

The newer South America, with its wonderful possibilities in the fields of commerce and science, has not been overlooked by the Johns Hopkins University. Through the munificence of Mrs. George Huntington Williams and her family, a foundation for lectures and research has been established in memory of the late Prof. Williams, the first professor of geology at Hopkins. With aid from this fund the University plans to send an expedition to explore the geology and mineral resources of the Central Andes in Peru and Bolivia.

The expedition will be in charge of Edward W. Berry, professor of paleontology, and Joseph T. Singewald, jr., professor of economic geology, who have already become authorities on the geology of this region by the publication of the results of earlier investigations based upon materials collected by Dr. Singewald during his extended travels in South America in 1915. Dr. Singewald has in press a textbook entitled "The Mineral Deposits of South America," which will shortly be issued by the McGraw-Hill Book Co.

The members of the party will leave Baltimore early in April, making their first stop at Guayaquil, Ecuador. From there they will proceed southward along the west coast, stopping at Pacasmayo to study the carboniferous deposits of that region. They expect to visit the cinnabar mines of Huancavelica, Peru, as well as various slightly developed coal fields scattered over the district. Time will also be spent in studying the coal fields of Chile, and the silver and tin mining districts of Bolivia, including La Paz and Potosi, where Dr. Singewald has already made preliminary investigations of the famous "Mountain of Silver."

Besides the study of these commercial areas and the gathering of large collections of igneous rocks, ores, and fossils for subsequent investigations by the staff and graduate students of the geological department, it is hoped that facts may be gleaned which will throw new light on the recent great changes of level of the high plateau of Bolivia—the land of the Incas. To this end, several geological sections will be measured across the eastern Andes from La Paz, Oruro, or Potosi, to determine the manner and geologic age of the formation of the Andes. Already, from a study of fossils from this area, Prof. Berry has shown that the prevailing ideas regarding this broad geologic problem

are incorrect and in need of serious revision. The elevation of the mountains and the extensive mineralization of the whole Andean region have been very modern events geologically.

South America is of special interest to Baltimoreans, and the sending of an expedition from this city to study the prospective development of its mineral resources and its geologic history is especially appropriate, in view of the intimate trade relations which have emanated from this city for generations. It will be recalled that a few years ago it was proposed that local bankers and business men should charter a vessel and visit the principal South American ports to cement our commercial relations with the rapidly growing lands of the South. In 1915 Baltimore was chosen as the North American terminal of the Peruvian steamship line. War conditions, unfortunately, soon forced a suspension of this service. However, the Bethlehem Steel Co. has iron properties on the west coast, and much North American capital is invested in copper and other mineral developments, while proposed railroad construction will open up regions of untold wealth and great commercial possibilities.

It is hoped that the devotion of the Williams fund to the study of South American geology will establish closer relations between the ancient and scientific bureaus of Peru, Bolivia, and Chile, with the Johns Hopkins University, which is beginning to receive geological students from these countries.

SECOND PAN AMERICAN AERONAUTIC CONVENTION.

The Second Pan American Aeronautic Convention and Exhibition is to be held at Atlantic City, New Jersey, from May 1 to June 1, 1919, inclusive. The venture is under the auspices of The Aero Club of America, The Aerial League of America, and the Pan American Aeronautic Federation. Supplementing the ordinary exhibition features a series of contests will be held each Saturday, these to include such interesting events as seaplane contests, Curtiss marine flying trophy and prizes, intercollegiate seaplane contests, land aeroplane contests, dirigible contests, kite balloon contests, parachute competition, aviette races, etc. Exhibitions and demonstrations of the latest inventions in all forms of aviation will form the main features of the daily activities.

The Governments and aeronautic, sporting, scientific, industrial, and civic organizations of the United States and all countries of the world, excepting Germany and her allies, have been invited to send representatives and to participate in this great aeronautic event. On arrival in the United States foreign representatives are requested to call at the headquarters of the convention committee at No. 297 Madison Avenue, New York City, to register and receive badges and official programs.

SUMMER SCHOOL OF ENGLISH FOR LATIN AMERICAN STUDENTS.

Many students coming from the Latin American countries to complete their education in the colleges and universities of the United States are handicapped by an insufficient knowledge of English, and sometimes they also need to make up some subject in order to meet

the entrance requirement here. The Section of Education of the Pan American Union has made arrangements with the authorities of the Summer School of the University of Georgia, at Athens, to receive such students and help to fit them better to take up their work in the fall at the various colleges and universities where they are to study.

The regular session of the Summer School is from June 30 to August 2 or 22, depending on the subjects taken, and students can arrange, if desired, to continue their work under private tutors until they enter college in September. Expenses for room and board and for instruction are estimated at about \$10 to \$12 a week, exclusive of private tutoring. There will be a special class in English for Latin American students, and courses are offered in practically all high-school subjects and many college subjects which will provide an opportunity to make up any work in which such students may be deficient, such as mathematics, science, American history, etc. The Latin American students will be specially looked after by a Spanish-speaking member of the faculty, who will help them in planning their courses and in securing suitable living accommodations.

The entire plant of the university, including gymnasium and other recreational facilities, is placed at the disposal of the students.

Athens, the seat of the University of Georgia, has a pleasant and healthful situation among rolling hills, and may be reached in about 24 hours from all the principal cities of the East. From New Orleans, the port of entry of large numbers of Latin American students, it is easily reached as a stopping place on the way to northern educational institutions. It is also conveniently located with reference to colleges in the Southern States. Even students who are already in the Northern States may be glad of the opportunity to become acquainted with the southern section of the United States.

All Latin American students who are interested in this school may communicate with the Section of Education of the Pan American Union, Washington, D. C., or with the superintendent of the Summer School, University of Georgia, Athens, Ga.



AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINE REPUBLIC.

According to the report of the ministry of the treasury presented through the director general of statistics, ARGENTINE FOREIGN COMMERCE for the year 1918 gave the following results: Cash value of foreign commerce, 1,307,392,000 pesos gold, distributed as follows: Importations, 480,896,000, and exportations, 826,496,000; balance in favor of Argentina, 345,600,000 pesos gold. The figures vary widely from those of previous years. The exportations of 1918 exceed those of any former year, both in bulk and value, surpassing the highest value previously recorded by 244,000,000 pesos gold, since, in 1915, the value of the total exportation conducted was 582,179,000 pesos gold. However, the quantity of articles imported in 1918 is less than any year of the past 15, representing a sum equal or slightly greater, in proportion to the population, than that recorded 15 or 20 years ago and something over one-third that of the year of greatest importations. Indeed, the commercial balance in favor of the Republic is the highest yet attained, exceeding any previous record by 68,900,000, as in 1915, hitherto the highest, the balance totaled only 276,600,000 pesos gold.

By a resolution of the ministry of the treasury of February 15, customs officers are authorized to permit the EXPORTATION OF CEREALS (wheat, oats, flax, and corn) providing that the shippers can prove to the aforesaid officers that their produce was bought at prices not lower than the minimum established by the agreement of February 4.

The general board of agriculture and agricultural defense has nominated Señor Carlos Fangeaux to go to Misiones and study the methods there employed for the preparation and conservation of YERBA MATE. He will attend the yerba mate growers' convention to be held at the close of the year under the auspices of the Argentine rural association ("Sociedad Rural Argentina").

By a decree of the minister of public works the section of the BUENOS AIRES CENTRAL RAILWAY (Ferrocarri Central de Buenos Aires) between Rojas and Villa María was definitely made ready for public service. The line includes kilometers 304 and 315. In the same decree the period of three months is fixed in which the company is to present plans for the installations it will construct at the station located at kilometer 314½.

With the purpose of stimulating interest in the planting and cultivation of fruit trees, the agricultural museum of the Argentine rural association is organizing a FRUIT GROWERS' CLUB, which will meet at intervals between November of the present year and April, 1920.

According to information received from the Argentine legation in Rio de Janeiro, ARGENTINE FRUITS are to be imported free of duty to Brazil by the terms of a recent law which abrogates previous regulations concerning the matter.

The ministry of agriculture reports the following statistics concerning the PRODUCTION AND CONSUMPTION OF MEATS in the year 1917; through the directorate of statistics and rural economy it is learned that during the aforesaid year 762,449 tons of meats were shipped by the refrigerators and packing plants exclusively as follows: For export, 681,293 tons; for domestic consumption, 81,156 tons. Of this total, 90.5 per cent was beef, 7.4 mutton, and 2.1 pork.

A conference of engineers and agriculturists is being organized in Buenos Aires to encourage the exploitation of the NORTHERN TERRITORIES of the Republic, with the following specific objects: Detailed study of the various problems related to the development of the territories under consideration; presentation of such problems to capitalists and to the consideration of official means of their solution; holding of lectures upon the productive capacity of the territories; and the publication of minutes of the deliberations held at all sessions.

According to an announcement just made, the Brazilian Lloyd Co. will establish a NEW STEAMSHIP LINE between New York and Buenos Aires, calling at Brazilian ports. The first vessel to ply on the line is the *Uberaba*, which will leave New York early in May. The *Uberaba*, formerly called the *Henry Woermann*, is a steamship of 6,062 tons displacement, owned at present by the Government of Brazil, and which was constructed in Hamburg in 1911.

BRAZIL.

Plans for the construction of a RAILROAD in the State of São Paulo are under consideration. The line is to extend from Pederneras through Agua Limpa, Saturno, and Poço Alcalino de Quilombo to the Batalga River at Rainha dos Anjos do Batalha, thence northwest to Miguel Calmon, traversing 111 kilometers through a very fertile region rich in woods.

It is planned to run a RAILROAD LINE which will connect the three mountain towns Petrópolis, Therezopolis, and Friburg. The route will be one of the most picturesque and fascinating in the country.

The Swift Co. of Rio Grande has concluded a contract with the "Nelson Line" of London by which the latter agrees to reserve six

vessels of its fleet for the **TRANSPORTATION OF FROZEN MEATS** from the Brazilian port to various ports of Great Britain. Voyages will be made fortnightly, every boat transporting between 1,300 and 1,400 tons of meats.

According to a report made to the ministry of the treasury by Dr. Ozorio de Almeida, the assets of the **BRAZILIAN LLOYD CO.** which in June, 1918, amounted to 78,809 contos (conto paper = \$270 United States gold), now total 197,125 contos. In this sum is included the value of the German steamships in its possession, calculated at 111,394 contos, 80,354 of which represent the vessels ceded to the French Government and 31,040 contos those in the service of the Brazilian Lloyd Co.

The Brazilian Government has granted permission to the Government of Italy for exportation from Brazil of 400 tons of **LARD** bought recently by that country.

In the 13 months since the creation of the central bureau of domestic production (*Delegación Central de Producción Nacional*) 2,071,026 kilograms of grain, fodder, and vegetable **SEEDS** have been distributed by the bureau among agriculturalists of the country.

A Brazilian newspaper states that the **CONSUMPTION OF MANIOC** is becoming quite general in England, and predicts the popularity of the Brazilian product.

The State of Paraná this year plans to commemorate the definite inauguration of **WHEAT CULTIVATION** in the section by holding a wheat exposition and establishing the *fiesta de pan* (bread carnival).

The inspector of wheat fields estimates the **WHEAT CROP** this year at 200 tons in the State of Rio Grande do Sul, or double that of the previous crop, and the largest yet attained in the country.

In the annual general meeting held in Rio de Janeiro the **UNITED STATES CHAMBER OF COMMERCE OF BRAZIL** elected the following officials of the board of directors for the present year: President, Señor Louis R. Gray; first vice president, W. V. B. Van Dyck; second vice president, H. M. Sloat; and treasurer, William Lowry.

On February 22 a **COTTON CONFERENCE** was held in the city of São Paulo to discuss plans and methods to be employed in the development of the industry in the country.

According to official statistics of the port of Rio de Janeiro, 893 families of **IMMIGRANTS**, consisting of 2,707 persons, and 4,544 immigrants without families, entered the country during 1918 through that port. They consisted of the following nationalities: Argentinian, 112; German, 1; Brazilian, 485; Belgian, 8; Chilean, 5; Chinese, 2; Colombian, 1; Danish, 2; French, 211; Greek, 8; Spanish, 790; Dutch, 4; Italian, 215; English, 67; Japanese, 5; North American, 45; Norwegian, 2; Portuguese, 5,058; Peruvian, 6; Rus-

sian, 119; Roumanian, 5; Swiss, 15; Swedish, 3; Servian, 1; Turks, 37; and Uruguayan, 44. During the same period 4,069 emigrants left through this port.

Capitalists of Puerto Alegre, Pelotas, and other points in the State of Rio Grande do Sul have organized a TELEPHONE COMPANY which will install and operate a modern telephone system in those cities, bringing workmen and equipment from the United States.

According to data published by the Commercial Statistical Bulletin of the Ministry of the Treasury, Brazil exported between January 1, 1915, and October 31, 1918, a total of 126,419 tons, 9,562 tons, and 119,620 tons of FROZEN MEATS, DRIED MEATS, AND HIDES, respectively. Of the frozen meats, 56,778 tons were exported during the first nine months of 1918, 4,339 of the dried meats during the same period, and 37,651 of the hides.

According to the Caracu Association Herd Book just published, on January 31 of the present year there were 159 calves, 1,663 cows, and 119 bulls of CARACU CATTLE in Brazil.

CHILE.

The Government of Chile has contracted to furnish 200,000 metric quintals of NITRATE to the Government of Holland at 13½ shillings per metric quintal. Holland is to supply the ships for transportation, which will bear cargoes of rice, tea, coffee, sugar, and other products to merchants of Mejillones.

Some months ago the "Sociedad Nacional de Pesca," a corporation fostering the FISHING INDUSTRY, was established with a capital of 500,000 Chilean pesos. One of the objects is the placing of several varieties of fish along the entire Chilean coast. This has been done between Coquimbo and Valdivia. The company has also installed a plant in Talcahuano where fish are cleaned, packed, and shipped. The establishment has a large refrigerator where fish are kept until ready for shipment by train.

MARITIME TRAFFIC WITH SWEDEN, interrupted by the war, is about to be reestablished. One of the first steamship lines to conduct direct service between the two countries is the Johnson Line, a well-known Swedish company, which will have four vessels of over 6,500 tons operating on the line. Formerly these vessels transported manufactured articles to Chile in exchange for Chilean products.

On February 26 the minister of the treasury issued regulations relative to the BUILDING OF DRY DOCKS and other works used in the repairing of ships in the ports of the Republic.

The MINERALS EXPORTED by the Chile Copper Co. and the Chile Exploration Co. during the three months ending September 30, 1918, were valued at \$3,276,944—an increase of \$1,270,273 over the exports of the previous quarter, which amounted to \$2,006,671.

COLOMBIA.

In the latter part of February competitive examinations were held for candidates for the positions of chief and assistant chief of the bureaus of information and commercial propaganda of Colombia, authorized by law 11 of 1918 to be established in connection with the consulates of London, New York, and Paris. The contest proceeded in accordance with the rules set forth in a presidential decree of January 22. After a thorough consideration of the papers presented the judges appointed by the President decided in favor of Gonzalo Córdoba, Alberto Dupuy, and Roberto Pinto Valderrama, who were thereupon appointed to the London, New York, and Paris offices, respectively.

By law No. 43 of 1919 the MARITIME SALT MINES of the Atlantic coast were ordered exploited.

According to municipal statistics the Antioquia Railroad during 1918 transported 175,750 parcels of MERCHANDISE, weighing 10,880,505 kilos, to Medellin.

The leading capitalists of the Department of Tolima have organized a STOCK-RAISING ASSOCIATION in Ibagué to promote cattle raising in that section.

The minister of the treasury has contracted with Tracey Bros. of London for the sending of 100,000 SACKS OF JUTE FIBER to Puerto Colombia free of duty. The jute is to be used for packing salt at the salt works along the coast.

Under the title "A NEW VEGETABLE PRODUCT" a paper in Bogotá publishes an account of a tree that grows along the margins of the Magdalena and Opon Rivers in the Department of Santander, which secretes a sap locally known as "perillo," which has the taste and nutritious elements of cows' milk. It is condensed in cakes for shipment and is popular in confectioners' shops. In the region where it is produced in abundance it is used for coffee in preference to other milk, being considered more palatable.

The governor of Tolima has signed a contract for the construction of a BRANCH RAILROAD from Espinal to Saldana via Guamo. The projected line will pass through a wealthy stock-raising and agricultural section.

CUBA.

The Cuban Steamship Co. has voted to substitute petroleum in place of HARD COAL formerly used as the motive power on the ships of the line. The first vessel to use the new combustible was the steamship *Santiago de Cuba*.

In Camaguey large tracts have been set to castor-oil plants with a view to the establishment of a LUBRICATING OIL FACTORY in

Cuba. The experiments made up to the present time give promising results, and it is expected that the industry will become a considerable factor in the economic life of the Republic.

In the several ports of the Republic 1,373,798 tons of sugar from the PRESENT SUGAR CROP had been received before the 15th of March of this year. Between the 15th and the 20th the mills had produced 125,000 tons, which, together with the former figure, gives a total of 1,498,798 tons produced by the 20th.

The following officers were elected at a general meeting of the BOARD OF DIRECTORS OF THE CHAMBER OF COMMERCE OF HABANA: President, Don Carlos de Zaldo; vice presidents, Don Sabás E. de Alvaré, Don Ernesto B. Calvó, and Don Carlos Arnoldson; treasurer, Don Charles C. Dufan; and general secretary, Don José Durán.

AN INSURANCE COMPANY called "La Unión Latina" was established in Habana in February. The company will insure against accidents as a result of the occupations stipulated in the law of June 12, 1916.

Señor Hannibal J. de Mesa has been named as COMMERCIAL AGENT of the Republic to study the economic conditions in Poland and other European countries in the wake of the war, report concerning the steps which should be taken to increase the trade with countries already maintaining commercial relations with Cuba, and advise as to the means of establishing such relations with other countries.

By a presidential decree of March 7 the SALE OF RIFLES of over 22 caliber or 5.5 millimeters has been prohibited, as well as of cartridge shells, during the closed season.

By a presidential decree of February 27, 1919, the increase of 15 per cent on STORAGE RATES authorized by a law of January 13 has been abrogated in the case of sugar.

Recently the INTERNATIONAL TRADING CO. was organized in Habana with a capital of \$100,000, the object being to represent various European and North American manufacturing interests in Cuba. The president, Dr. Pedro Zayas, is president also of the Cuba Electrical Supply Co.

The EXPORTATION OF REFINED SUGAR produced from crude sugar of the 1918-19 crop was authorized by a presidential decree of March 10, 1919.

ECUADOR.

A presidential decree of the 30th of January authorizes the EXPORTATION OF PEANUTS through the warehouses of the Republic upon the payment of 5 per cent ad valorem, fixed according to the price of the product in the market from which it is shipped.

The governor of Guayaquil has requested the consuls of Ecuador in Panama and New Orleans to permit the depositing of GOODS SHIPPED TO ECUADOR in Panama upon orders, that they may be taken to Guayaquil by boats of any company.

The value of ECUADORIAN COMMERCE in the year 1917 was 54,498,111 sucres (sucre = \$0.486 U. S.), as against 55,349,513 in 1916 and 43,845,028 in 1915. The foregoing figures may be analyzed as follows: 1915, exportation, 26,533,064 sucres, and importation, 17,309,964; 1916, 36,151,629 and 19,197,884, respectively; 1917, 33,558,014 and 20,940,097, respectively. The percentage of imports by countries, for 1917, was: United States, 59 per cent; England, 25; Spain, 5; France, 3; Peru, 2.5; Italy, 2; Chile, 1.5; all other countries, 2. Percentage of exports, by countries, for the same year was: United States, 78 per cent; France, 9; Spain, 4; Chile, 4; and all other countries, 5.

HAITI

The steamship *Juno* left Port au Prince recently with a cargo of 5,000 sacks of SUGAR. Le *Matin*, a daily newspaper, which gives this news, declares that this is the first export of Haitian sugar since the declaration of independence. The *Juno* sailed for New York bedecked with flags.

Le *Moniteur*, the official newspaper of Haiti, published in a recent copy the articles of incorporation of a new commercial firm, which has been organized under the name of "Société Commerciale d'Haïti," with a capital of \$500,000. The company is authorized to undertake any kind of commercial transactions within the Haitian territory and abroad.

HONDURAS.

Permission has been granted by the Government to Ing. Rubén Bermúdez H. to establish a FLOUR MILL in San Pedro Sula to operate for the period of 10 years, with a capacity for milling 25 barrels, of 200 pounds each, of wheat flour daily, the plant to be exempt from all fiscal or municipal taxes in operation or to be established during the term of the concession.

MEXICO.

The department of agriculture and commerce has appointed a committee of engineers to make a detailed study of the waters of the COLORADO RIVER with a view to irrigating a large territory in the northern part of Lower California, the fertility of which has been neglected because of the lack of water.

According to official statistics, from the year 1910 to the present time 10,000 MINES HAVE BEEN DENOUNCED in the Republic.

The chamber of commerce of the State of Veracruz reports that

the CORN CROP this year shows an increase of 20 per cent over former years, and the corn is of a superior quality. From the 1st of March the market was flooded, so that the prices quoted have been low.

The Secretary of commerce has received official data to the effect that the COFFEE CROP in the territory of Quintana Roo has been excellent, exceeding that of last year by 10 per cent.

In response to petitions received by the department of commerce from small agriculturalists setting forth their ability to cultivate Government lands, the new LAND ALLOTMENT has been commenced in the State of Chiapas, small parcels of land being given the farmers of that section for cultivation at their own expense. Lately over 70,000 hectares, which previously had reverted to the State upon the declaration of invalidity of the concessions which Sr. Rafael Dorantes and other landholders had granted for them, have been distributed and are under cultivation by the concessionaires.

Recently 50 boxes of articles were shipped from Mexico to the United States for display in an EXHIBITION OF MEXICAN EXPORTS which will be opened in New York shortly for an indefinite time.

The Mexican press announces that the first shipment of AGRICULTURAL MACHINERY ordered by the National Government to sell to agriculturalists at cost in order to stimulate agriculture, has been received at Mexico City, and the plan has proved so satisfactory that a further order has been placed with several United States firms for plows, cultivators, seed-drillers and harvesters of various classes and sizes.

An OIL DEAL unprecedented in the history of the industry in the country has been closed between certain oil companies of Mexico and a well-known American corporation, Cochrane, Harper & Co., by which the latter agrees to purchase 50,000,000 barrels of oil from the Mexican companies, to be mined from wells which have not been in operation for some time. The oil will, in turn, be supplied to the railways of the northern part of the United States, with whom the company has entered into contracts obligating itself to furnish the oil necessary for operating their lines. The purpose is to experiment thoroughly with the project in the hope of further enterprises of greater magnitude in the future, as it is feared that at present serious difficulty may be experienced owing to the shortage of tank boats.

The GOVERNMENT VESSEL *Rafael Miranda* was recently launched in the port of Mazatlan, where it was constructed by a Mexican shipowner.

A Merida newspaper reports that the New York agency of the Henequen Market Comptroller (Comisión Reguladora del Mercado del Henequén) has recently sold 63,500 bales of henequen to the United States Food Administration at 15 centavos a pound in the

ports of the United States on the Gulf of Mexico and at 15½ centavos in the warehouses operated by the Comptroller in the United States. The fiber is to be delivered during the present month of April.

Several planters from the interior of the country have interviewed the secretary of industry and commerce for the purpose of obtaining exact data as to the most profitable methods of CULTIVATING HENEQUEN and the sections of the interior where it might be planted on large tracts of territory well adapted to the purpose. It is evident that interest is growing widely in the henequen industry throughout the Republic.

A HIGHWAY has been constructed in Lower California which links the capital of the Northern District with Tijuana and Ensenada. The work cost 1,000,000 pesos.

NICARAGUA.

According to recent legislation the price of AGUARDIENTE may not exceed 20 centavos per liter, except on the Atlantic coast, where it may be sold for as high as 35 centavos, and in Chontales, where 25 may be charged.

PANAMA.

A United States syndicate which is exploiting a MANGANESE MINE near Portobelo, in the Province of Colon, having exported to the United States more than 20,000 tons of the mineral, is making a minute study of another bed of greater magnitude in the same region, with a view to exploiting it on a large scale if it is deemed profitable to transport the ore to the port of Portobelo, 12 or 15 miles away.

The fact that in the city of Panama alone there are over 10 agencies for United States flour indicates the popularity of WHEAT FLOUR imported from the United States, since most of the towns of the Republic are supplied through Panama City. Owing to the restrictions in 1918 in the United States, Panama imported in that year less than in 1917, when 4,104,000 kilograms of flour, valued at \$428,000 were imported, of which 3,800,000 kilograms, worth \$398,000 were wheat flour from the United States.

An American company is constructing a two-story reinforced concrete building in the city of Colon preparatory to the installation of a COCONUT AND PALM OIL FACTORY and derivatives, including glycerine, caustic potash, carbonated potash, soda, etc. The producing capacity will be 1,500 gallons of coconut oil and 200 of palm oil daily.

In 1918 the EXPORTATIONS conducted through the port of Bocas del Toro to the United States were valued at \$2,423,680, as compared with \$2,602,197 the previous year, bananas in both years

being the chief value, as in 1918, 4,466,540 bunches were sent out, valued at \$2,297,663, and in 1917, 4,843,512 bunches, valued at \$2,467,442.

PERU.

The President, in consideration of the fact that law No. 2886 authorizes the investment of the net receipts of the tax on tobacco in the promotion of certain railway projects, and that its expenditure in the construction of such railroads would be of manifest advantage to the public, on February 5, 1919, issued a decree by which a limited company is organized, with legal headquarters in Lima, which will be known as the PERUVIAN RAILWAY CO. (Compañía de los Ferrocarriles del Perú), with the object of constructing and exploiting the railways ordered by the Government at State expense. The aggregate capital will be 300,000 Peruvian pounds, distributed in 30,000 shares of 10 pounds each. The decree also makes stipulations relative to the manner in which the capital is to be expended and subscribed, the railroads constructed and administered, the commission which the company will derive from it, etc.

By law No. 2912 of the national Congress the President is authorized to close and settle accounts and compromise upon questions pending with the concessionary LIMA-HUACHO RAILWAY CO. and to organize a federal company to exploit it, modifying the proposed route so as to lead directly to the capital in a straight line. The surplus material may be utilized on one of the projected extensions of the main line.

The GOVERNMENT VESSEL *Quiruvilca*, constructed in a dock-yard at Callao, was auspiciously launched last February in the port of Callao.

According to data published in *El Financista* of Lima concerning PERUVIAN-ECUADORIAN TRADE, in 1917 Peru exported 1,689,407 kilos to Ecuador of products valued at 824,205 sucres and imported in exchange 2,219,918 kilos, valued at 289,718 sucres. The importations were composed principally of cacao, coffee, manufactured and leaf tobacco, and chopped sugar cane. Peru also imported 61,659 kilos of hat straw for use in the manufacture of hats, worth 18,994 sucres; 53,527 kilos of "macora" straw, valued at 65,846 sucres; and 321,719 kilos of mangrove bark for tanneries, valued at 10,286 sucres.

SALVADOR.

During the first nine months of 1918, 32,011 metric tons of products were EXPORTED, with a declared value of 24,059,893 pesos silver. Compared with the same period of 1917 it is found that there was a decrease of 7,690 in tons exported but an increase in value of 581,409 pesos.

IMPORTATIONS to the extent of 15,699 metric tons, valued at 4,601,437 pesos gold, were received in the first nine months of 1918.

By February 203 kilometers of the RAILROAD under construction between the pier of Punta Cataco of La Unión port to the frontier of Guatemala were completed. At the same time the sector from Santo Domingo to Santa Cruz Michapa, 21 kilometers in length, was ready for the rails to be laid. In 1918 the roadbed was extended 45 kilometers and will be ready for use at any time.

URUGUAY.

In order to meet certain claims the national congress has created a specific tax of one-half centesimo per kilogram of refined YERBA MATE received in the country, in addition to the regular tax. After the payment of the obligations the new tax is to be abrogated.

The regulations in force concerning the INSPECTION OF TOBACCO FIELDS have been modified, it being agreed, among other things, that tobacco growers declare before the proper authorities the plantations they have made, stating the area and number of plants and other details. A record of the tobacco growers of the vicinity is to be kept in a municipal registry.

On the 15th of March a SOUTH AMERICAN STOCKMEN'S EXPOSITION was held in Montevideo, following the South American Industrial-Agricultural Exposition organized by the national commission of rural industry and held at the close of January. The stockmen's exposition was one of the most important that has yet taken place in South America.

A law has been passed by the national congress creating the NATIONAL BOTANICAL GARDENS AND NURSERY "La Estanzuela," in which the methodical selection of plants on a scientific basis is to be undertaken, with especial reference to wheat, oats, barley, corn, flax, and the leguminaceae. The adaptation of plants cultivated, including fodder plants, and agricultural experimentation in general also will be considered.

By the terms of a presidential decision of February 5, all VETERINARIES appointed to the animal sanitary commission may practice their profession, subject to the regular obligations and penalties, providing such practice is not allowed to interfere with their administrative duties.

The President has sent Senor Guido Corneo to Europe to study the DISTRIBUTION OF LIVE-STOCK PRODUCTS OF THE COUNTRY, since the sending of such exports to the principal markets of the world is exceedingly difficult at this time owing to abnormal conditions prevailing.

The President has organized the CENTRAL AGRICULTURAL DEFENSE COMMISSION, naming Senor Benjamín S. Viana as president.

VENEZUELA.

In conformity with article 92 of the law passed June 25, 1915, the Provisional President of the Republic has recently issued a decree regulating the EXPLOITATION OF WOODS on Venezuelan territory, either on lands belonging to the Government or to private citizens.

A newspaper of Caracas announces that a company has been organized in the United States by the name of the Caribbean Sea Co., with the object of exploiting the PEARL FISHING industry in the Isla de Margarita.

Since the law concerning COAL, PETROLEUM, AND SIMILAR RESOURCES determines the maximum number of hectares which may be contained in one project, but does not stipulate the number of contracts which an individual may enter into with the federal executive, the Provisional President of the Republic has decreed that one person may enter into as many contracts as may be necessary to include a territory of 100,000 hectares of coal (bituminous, anthracite, and lignite) and 40,000 of asphalt, petroleum, and similar resources, which is the maximum which may be acquired by transfer, according to article 20 of the cited ruling.

By presidential disposition the rights to the exploration and exploitation of COAL, OIL, AND SIMILAR DEPOSITS are to be granted to successful bidders at public auction in the free zones of the Uribante, Ayacucho, Bolivar, and Capacho districts, of the State of Tachira; and in the districts of Betijoque, Bocono, Carache, Escuque, Trujillo, Urdaneta, and Valera of the State of Trujillo.

The department of public works has recently signed a contract with Señor José Antonio Redondo, by which the National Government leases to him the SANTA BÁRBARA-EL VIGÍA RAILWAY, a national property in the States of Zulia and Mérida.

By a recent presidential decree a POLITICAL-COMMERCIAL BUREAU was created, to be under the direction of the minister of foreign relations, with the following functions: (1) The compiling of data concerning the economic and commercial life of the country and of information furnished by the Venezuelan legations and consulates in regard to the economic and commercial life of their several territories; (2) the preparation of reports on commercial, economic, or financial variations in foreign countries which might affect internal conditions, and the consideration of navigation and other means of communication necessary in conducting international trade; (3) consideration of international treaties and agreements reached, as well as laws passed in foreign countries relative to matters that might influence Venezuelan economic and commercial conditions; (4) preparation of reports on the economic and commercial situations of

foreign countries, to serve as a guide in the formulation of treaties, pacts, or agreements with reference to the economic and commercial situation of Venezuela; (5) information as to the probable development or coming status of various countries or sections in the light of the desirability of establishing, modifying, or doing away with consulates; (6) the consideration of treaties, conventions, or matters relative to international policies which Venezuela has proposed or may propose; (7) the establishing of an international advertising campaign for Venezuelan products, resources, and possibilities; (8) the formulating of comparative studies of legislation which has been adopted relative to economic subjects; the recommendation of projects of law which might facilitate international commerce or the notation of undesirable features of such laws as are now in vogue, and means for their reform.

ECONOMIC AND FINANCIAL AFFAIRS

ARGENTINE REPUBLIC.

According to official information from the ministry of the treasury, the STATE OF THE BANKS on January 31, 1919, was as follows: Payments on time and savings accounts, 10,777,728 pesos gold and 2,820,681,096 pesos paper; discounts and advance payments, 3,747,576 gold and 1,938,590 paper; existing in the country, 54,572,029 pesos gold and 830,884,403 paper; capital realizable in the Argentine Republic, 47,864,833 gold and 353,603,860 paper. The totals in December were: Deposits on current accounts, on time and in savings accounts, 11,249,068 gold and 2,818,040,054 paper; discounts and advance payments, 3,949,890 gold and 1,875,825,358 paper; existing in the country, 54,146,333 gold and 830,399,985 paper; capital realizable in the Argentine Republic, 47,864,833 gold and 353,265,216 paper.

On February 11, 3,024,007 pesos gold was deposited in bonds in the conversion treasury, having been withdrawn from certain Argentinian legations. Together with 279,465,449 gold pesos, balance from local deposits, there was on hand at that time a CASH BALANCE of 382,056,650 pesos. At the depositing of the sum referred to the monetary circulation increased by 6,872,745 pesos paper, the national currency throughout the Republic totaling at that date 1,161,328,800 pesos.

The Argentine Government has DEPOSITED in one of the Federal reserve banks of the United States the sum of \$2,917,800 or 6,872,745 pesos Argentine, representing the profit of the exchange by the transfer of £8,000,000 from England to the United States by way of France and Spain.

BOLIVIA.

By legislative enactment of February 3, 1919, the MORATORIUM for obligations payable in gold will be further extended to September 30 of the present year in cases where the creditor will not accept payment in notes issued by banks of the Republic.

The President has authorized the prefect of the Department of Potosí to contract a LOAN FOR HIGHWAY CONSTRUCTION. The principal is to be 500,000 bolivianos, with interest not to exceed 8 per cent annually and 2 per cent amortization fund. Of this sum, 400,000 bolivianos will be set aside for the construction of an automobile highway between Atocha and Tupiza, and 100,000 bolivianos for a similar road between Catagaita and Camargo.

On Januray 2, the new TAXES ON IMPORTED LIQUORS were announced. Following is the list, per dozen bottles: Bitters, 19.20 bolivianos; white wines, 24; liquors, such as cognac, whisky, and gin, 24; sweet wines, 24; beer in ordinary bottles, 3; beer and "chicha" in other containers, 0.40 per liter; mineral waters, 0.05 per kilo; soft drinks, 0.05 per kilo; table wines in ordinary bottles, 9.60 per dozen; in other containers, 0.08 per liter; light sparkling wines in ordinary bottles, 8.40 per dozen; in other flasks, 0.70 per liter; champagnes and other heavy sparkling wines, 24 per dozen; dry wines in ordinary bottles, 10.80 per dozen, and in other containers, 0.90 per liter. The national treasurer will deposit 20 per cent of the income from these taxes to the account of the Potosí-Sucre Railway and 30 per cent to the Cochabamba-Santa Cruz Railway.

BRAZIL.

The BANK OF BRAZIL, in which the Federal Government is the principal shareholder, has been an increasingly important factor in the economic life of the Republic during the past three years. Its balance, which at the close of 1915 revealed a total of 696,620,474 milreis (approximately \$174,155,118 United States gold), at the end of 1917 was 1,113,709,590 milreis (approximately \$278,427,398). The profits of the institution during this period were as follows: 1915, \$1,237,819; 1916, \$1,504,275; and 1917, \$1,573,503. Those of the first half of 1918 were \$1,431,977, the largest amount ever recorded by the institution for that length of time, and in fact almost as large as that of any previous year.

The National City Bank of New York has been authorized by the ministry of the treasury to establish a BANKING AGENCY in

Porto Alegre and a subagency in the city of Rio Grande, both in the State of Rio Grande do Sul.

According to official statistics the assets of the BRAZILIAN BANKS, domestic and foreign controlled, on July 31, 1918, amounted to \$1,408,721,250 gold, as against \$1,111,043,500 on the same date of 1917.

The receipts of the GOYAZ RAILWAY for the first 11 months of 1918 were 454 contos (conto paper = \$270 United States gold), compared with 312 contos in the entire year of 1917 and 241 in 1916.

The NATIONAL BUDGET for 1919 fixes the running expenses for this year at 80,953 contos gold (conto gold = \$546 U. S.) and 504,483 contos paper, distributed among the various ministries.

The net receipts of the São Paulo Railway Co. for the year 1918 were approximately 13,000 contos, which added to those remaining from the previous fiscal period (2,728 contos), total 15,728, allowing the company to issue two dividends during the year on the basis of 10 per cent, or a total of 9,200 contos.

During the year 1918 the tax-collecting office of Santos collected 18,507 contos paper in TAXES ON PRODUCTS subject to State taxation. The production amounted to 292,712,148 kilos of merchandise representing an official value of 205,916 contos.

The American Foreign Banking Corporation of the United States has just established a BANKING BRANCH in Rio de Janeiro with a declared capital of \$1,200,000.

Señor Milciades de Sá Freire has been named acting president of the BANK OF BRAZIL. Señor de Sá Freire has been acting as president since the resignation of Dr. Homero Baptista.

CHILE.

The EXPENSE BUDGET for 1919 has been fixed at 234,935,607 pesos paper and 66,858,245 pesos gold, distributed in the following manner: Department of the interior, 50,802,519 pesos paper and 179,573 pesos gold; department of foreign relations, 410,633 pesos paper and 1,342,828 pesos gold; religious service section, 1,490,410 pesos paper and colonization section, 453,574 pesos paper; department of justice, 11,166,308 pesos paper; department of public instruction, 44,425,530 pesos paper and 140,000 pesos gold; department of the treasury, 34,868,174 pesos paper and 48,649,662 pesos gold; department of war, 42,419,693 pesos paper and 137,063 pesos gold; department of the navy, 24,826,538 pesos paper and 16,204,013 pesos gold; department of industry and public works, 18,056,691 pesos paper and 233,272 pesos gold; and department of the railways, 6,024,533 pesos paper and 1,833 pesos gold.

A law has been passed authorizing the president of the Republic to collect an ADDITIONAL TAX in 1919 of 2 per 1,000 as decreed in

article 29 of the law of April 5, 1916, establishing a tax on district property.

According to a report of the minister of the treasury by the 31st of December, 1918, the following NATIONAL FUNDS were deposited by the Government: In London, £2,909,097; letters of credit payable, £715,010; in the United States, \$1,437,602; in the mint, 2,904,846 pesos gold and in fiscal treasuries of the Republic, 52,674,025 pesos in paper and 519,855 pesos gold.

The statistics given below are from the report of the fiscal inspector of banks relative to the CHILEAN BRANCH OF THE NATIONAL CITY BANK of New York in 1918: Bills of exchange bought, in pounds sterling, 7,026,232; in dollars, 53,504,787; in francs, 321,326; in liras, 9,500; and in Argentine currency, 555,123 pesos. Bills of exchange sold in pounds sterling, 6,778,425; in dollars, 55,359,081; in francs, 202,288; and in Argentine currency, 559,167 pesos.

During the year 1918 the RECEIPTS OF THE RAILWAYS from Arica to La Paz were 4,665,113 pesos paper, according to the minister of railways.

The balance in the SANTIAGO SAVINGS BANK on December 31, 1918, was 53,764,066 pesos paper, distributed among 262,607 accounts. The balance the former year was 38,810,034 pesos in 235,997 accounts. Consequently, the increase in 1918 was 14,954,042 pesos and 26,610 accounts. The bank statement showed that the mortgage bonds deposited in the bank totalled a balance of 9,265,657 pesos. Adding this balance to the increase in deposits, a total of 63,029,734 pesos in savings accounts is obtained.

COLOMBIA.

The receipts of the SOUTHERN RAILWAY (Ferrocarril del Sur) in 1918 amounted to \$133,381.57. The railway is 35 kilometers in extent.

In the NATIONAL BUDGET for receipts, expenditures, and public credit for the fiscal period from March 1, 1919, to February 28, 1920, the receipts of the year are placed at \$15,207,350 gold, the expenses to be distributed as follows: Department of government, \$6,392,301; foreign relations, \$351,320; finance, \$995,297; war, \$1,785,549; public instruction, \$835,017; agriculture and commerce, \$207,247; public works, \$1,133,718; and treasury, \$3,606,896.

The department of agriculture and commerce has contracted in behalf of the Government a LOAN of \$320,000 gold, subscribed by the following commercial organizations: Commercial Bank, \$100,000; International Banking Corporation, \$100,000; Banco Sucre, \$50,000; Angel López y Cia, \$25,000; Roberto Restrepo y Cia, \$15,000; Vázquez, Correa y Cia, \$10,000; Banco Dugand, \$10,000; and Banco Republicano, \$10,000. The Government also obtained a loan of \$200,000 in Cartagena with advantageous conditions.

The NET RECEIPTS of the Government in the second half of 1918 amounted to \$5,143,438.

In 1918 the receipts of the TREASURY OF THE DEPARTMENT OF ANTIOQUIA were \$2,069,318 as against \$1,939,359 in 1917 and \$1,736,902 in 1916.

By law No. 126 of 1919 the admission of coined sterling pounds and bills representing pounds is permitted to the national treasury.

The BUDGET OF BOGOTA for the present year has been fixed by the municipal council at \$1,281,247 gold, including the receipts from the street railway, the slaughterhouse, and the aqueduct. During the middle of February the steamship *Sousa* docked at Puerto Colombia with a cargo of \$1,000,000 in AMERICAN COINS for the Banco Mercantil Americano of Colombia, which will distribute them among its branches in Bogota, Barranquilla, Medellin, and Cartagena. Including this shipment, the bank has imported \$2,126,000 in gold coin within the past eight months.

COSTA RICA.

The administrator general of the PACIFIC RAILWAY (Ferrocaril del Pacífico) reports that the receipts of the department were 728,669 colones during the first 10 months of 1918 (January–October, inclusive), while the expenditures amounted to 571,704 colones, leaving the net receipts at 156,965 colones, as against 78,869 colones for the entire year of 1917, 14,129 in 1916, \$3,679 in 1915, and 43,169 in 1914.

At a general meeting of the stockholders of the CRÉDITO AGRÍCOLA OF CARTAGO held early in February it was voted to increase the aggregate capital of the bank to 200,000 colones. Almost the entire new issue of shares (amounting to 100,000 colones) was subscribed to by the stockholders present at the meeting.

A recent presidential decree provides for the execution of law No. 3 of December 14, 1918, for the conversion of a part of the INTERNAL DEBT and the creation of funds for that purpose. The minister of the treasury will issue bonds payable to bearer and to the account of the public treasury in denominations of 1,000 and 100 colones upon application of holders of State obligations. A total of 8,000,000 colones will be issued in bonds of 1,000 colones (series A) and 2,000,000 in those of 100 colones (series B). These bonds are to be known as bonos de conversion, 1918 (convertible bonds, 1918).

DOMINICAN REPUBLIC.

The Government has ordered the printing of 170,000 internal-revenue STAMPS to be used in payment of taxes on legal documents. Stamps of the following denominations will be issued: \$0.25, \$0.50, \$1, \$2, \$4, and \$6.

ECUADOR.

On October 28, 1918, the new law concerning TAXES ON AGUARDIENTE and domestic and foreign wines was approved and went into effect January 1. The consumer pays a tax of 15 per cent on the declared value of wines, liquors, and other foreign alcoholic drinks, the declaration being accepted in the consular lists in the customhouses. The new law does not abrogate the customs tariffs on imports previously in force.

On December 20, 1919, the President promulgated the new law fixing taxes on aguardiente, alcohol, and other foreign and domestic liquors.

The loan section of the Quiteña Agricultural and Industrial Co. (Compañía Quiteña de Crédito Agrícola e Industrial) has been very active in the past year. The balance drawn up December 31, 1918, shows that 3,296,967 pesos silver were lent during the year, for which mortgage bonds (cédulas) to the value of 3,049,575 were issued. In 1917 loans of 2,993,907 were made, with 2,655,975 pesos in mortgage bonds issued.

GUATEMALA.

The following statistics are reported concerning REAL PROPERTY for the year 1918: Sales and donations, 12,897,267 pesos paper money; mortgages, 92,586,607 pesos paper; and cancellation of mortgages, 53,818,687 pesos paper.

During 1918 the Government treasury reports the following concerning ORDINARY EXPENSES: Receipts, 110,937,325 pesos paper; expenditures, 77,666,023 pesos paper, leaving a balance of 33,271,302 pesos.

MEXICO.

According to information published by the department of Finance, the NATIONAL REVENUES received in 1918 amounted to 149,141,373 pesos Mexican, distributed as follows: Interior taxes, 90,874,696; foreign trade, 37,637,908; taxes on founding, refining, assaying, and coining, 475,664; postal system, 4,375,073; telegraphs, 3,851,853; general treasury of the nation, 1,926,178; and henequen sold to the Reguladora Commission, goods intercepted, consulates, and other sources, 10,000,000, totaling as given above.

The Mexican press announces that the BALANCE OF RECEIPTS AND EXPENDITURES of the national treasury shows that in 1918 55,000,000 pesos in round numbers were saved, since the budget provided for expenses of 205,000,000, but the actual expenditures were only 150,000,000 pesos.

By the beginning of March 11,240,000 pesos were coined in SILVER in the new series, according to the report of the mint of Mexico. The

minting report of 1918 is as follows: Gold coins of 20 pesos, 56,610,000 pesos; of 5 pesos, 3,045,000; and of 2.50, 4,260,000, a total of 63,915,000 pesos. Silver coins of 1 peso (new series), 3,050,000 pesos; of 0.50 (old series), 660,000; of 0.50 (new series), 1,330,000; total, 5,090,000 pesos. Copper coins, 0.05 pieces, 66,000 pesos; total, 66,000 pesos; total amount coined in 1918, 69,071,600 pesos. The minting during January and February of the present year is as follows: Gold, of 20 pesos, 4,000,000 pesos; of 10 pesos, 300,000 pesos; and of 5 pesos, 1,000,000 pesos; total, 5,300,000 pesos. Silver, of 1 peso, 2,330,000; and of 0.50 centavo, 4,480,000; total, 6,810,000 pesos. Hence the total sum coined before February 28, 1919, was 81,181,600 pesos Mexican.

NICARAGUA.

On January 2, 1919, the President approved the NATIONAL BUDGET prepared by congress. The budget for the present year is identical with that passed December 15, 1917, with the additional clause of June 12, 1918, congress reserving the right to make such modifications as may be deemed advisable.

PARAGUAY.

The INTERNAL REVENUE RECEIPTS during the 12 months of 1918 amounted to 11,839 pesos gold and 20,994.081 pesos paper.

According to the report of the general auditorship and office of the treasury, 42,389 pesos gold and 1,220,152 pesos paper were derived from TAXES ON REAL ESTATE during the years 1912-1918, inclusive. Of this amount, 19,204 pesos gold and 343,485 paper were received during 1918.

During the middle of February the President issued a decree which establishes the new LAND TAXES in force during the present year.

SALVADOR.

During the year 1918 TAX RECEIPTS in the Republic totaled 10,409,018 pesos paper, distributed in the following manner: Customhouse receipts, 5,742,506 pesos; liquor taxes, 2,586,616; documentary revenues, 400,377; direct taxes, 393,274; miscellaneous taxes, 567,193; and governmental services, 719,051 pesos. Compared with the year 1917 there was a decrease of 2,076,113 pesos in tax receipts. The expenditures of 1918 were 11,699,775 pesos, or 973,249 less than in 1917.

URUGUAY.

The taxes collected through the BUREAU OF SUPPLIES, OCTROI TAXES, AND MERCHANDISE during the year 1918 amounted to 1,354,673 pesos.

According to the latest presidential message, during 1918, 4,271,736 pesos were received into the MUNICIPAL TREASURY OF MONTEVIDEO, and the expenditures for the same period amounted to 4,135,290 pesos, leaving a pleasing surplus in the treasury at the end of the year.

The receipts of the office of PUBLIC CHARITIES during the past year were 2,715,762 pesos and the expenditures 2,683,540, leaving a fund of 32,222 pesos in the treasury.

According to statistics officially reported concerning the FINANCIAL SITUATION of the country for the fiscal year ending with June, 1918, a DEFICIT of 2,627,396 pesos remained at that time, covered by an issue of convertible internal debt bonds at $6\frac{1}{2}$ per cent interest and 1 per cent amortization, amounting to 3,000,000 pesos. The deficit for the current year is estimated at 2,513,142 pesos, or 114,254 less than that of the previous fiscal year.

The total IMPORT TARIFF RECEIPTS for the past eight fiscal years—that is, the term 1910–11 to 1917–18, inclusive—amounted to 100,683,255 pesos, 58,706,749 pesos of this amount being the receipts of the period 1910–11 to 1913–14, and 41,976,506 the amount received during 1914–15 to 1917–18, showing a difference of 16,730,243 in favor of the former period.

The NATIONAL EXPENDITURES during the fiscal years 1914–15 to 1916–17, inclusive, amounted to 111,315,987 pesos, omitting the expenses of departments which have independent incomes.

Liquidation of the ANNUAL DEFICITS took place to the following extent: 1914–15, 933,032 pesos; 1915–16, 3,503,605; 1916–17, 1,448,204; and 1917–18, 2,627,396, showing a total of 8,512,238 pesos. This sum is increased to 11,330,368 pesos in Government internal debt bonds, by the sums added to the receipts before the close of the respective fiscal years, this amount showing the results obtained by balancing the budget, as done during the four fiscal years cited.

The National Banking Inspection reported the following statistics concerning the STATUS OF THE BANKS: Gold in the banks December 31, 1918, 49,404,033 pesos; gold on the same date of 1917, 46,103,389.

During January the BANCO DE LA REPUBLICA held 45,049,211 pesos gold.

VENEZUELA.

On December 31, 1918, the PUBLIC DEBT of Venezuela amounted to 145,527,628 bolivars, distributed in the following manner: Internal consolidated debt at 3 per cent, 46,623,077 bolivars; recorded debt, 2,098,652; treasury bonds, 349,102; debt due under international conventions (known as diplomatic debt), 96,456,797. The debt in 1916 totaled 160,566,756 bolivars, so that in the past two

years 15,093,127 has been paid. Since by December 31, 1917, the population of the Republic was 2,844,618, the quota of every citizen in the public debt is slightly under 51.16 bolivars, or about \$10, if one considers the increase in population in 1918.

The net profits of the CARACAS ELECTRICAL COMPANY (Compañía de Electricidad de Caracas) in 1918 amounted to 538,267 bolivars, distributed as follows, by vote of the board of directors: Reserve fund, 26,699; securities fund, 26,699; amortization fund, 26,699; dividends, 455,000; and for surplus of the first half of 1919, 3,168 bolivars. The company's reserve fund is at present 356,068 bolivars, and the securities fund, 167,357 bolivars.

The BANCO DE VENEZUELA reports receipts of 1,170,968 bolivars during the second half of 1918, and expenditures for the same period of 428,366, leaving a net profit of 761,602 bolivars, of which 15 per cent was set aside for the securities fund, 10 per cent for the reserve fund, 10 per cent for furnishings, 4 per cent for dividends, and the remainder for a surplus for the first half of 1919.



INTERNATIONAL TREATIES

BOLIVIA-VENEZUELA.

By an exchange of diplomatic notes February 15 and 18, a CONVENTION CONCERNING DIPLOMATIC MAILS was agreed upon between BOLIVIA and VENEZUELA for the accommodation of the legations in Caracas and La Paz. According to the terms of the treaty, diplomatic mails are to be inviolable and to be transported free of charge over whatever mail routes the two countries have, no package to exceed 15 kilograms in weight.

UNITED STATES.

By an agreement of August 23, 1918, ratifications of which were exchanged in Washington December 13 of the same year, the Governments of the UNITED STATES and JAPAN have agreed to extend for another period of five years, beginning August 24, 1918, the ARBITRATION CONVENTION concluded between them on May 5, 1908, which previously had been extended for five years by an agreement of June 28, 1913, upon the expiration of the term originally stipulated for its duration.

URUGUAY.

On February 11, 1919, ratifications of the TREATY OF GENERAL OBLIGATORY ARBITRATION were exchanged between URUGUAY and GREAT BRITAIN in Montevideo, as subscribed to April 18, 1918.

On December 16, 1918, ratifications were exchanged in Montevideo of the TREATY OF GENERAL OBLIGATORY ARBITRATION agreed upon in 1914 between URUGUAY and ITALY.



LEGISLATION

BOLIVIA.

By a presidential decree of January 31 the CONSOLIDATION OF RUBBER PROPERTIES and perfecting of their titles, which by a law of November 8, 1917, the owners were directed to make in parcels of 75 hectares per "estrada" was prescribed for the territory of Colonias to be made before the land tax commission. The proprietors are to present their titles to the commission within the peremptory period fixed. The original proceedings and decisions of the commission will be submitted to the national delegation, whose final decision will be conveyed to the minister of colonization, who will in turn file the necessary documents in the national registry of concessions at cost of the party interested. The grantees of rubber estates who do not present their titles within the time prescribed by the commission will lose their right to resurvey and to subsequent claims, the commission being authorized to render judgment by default, in accordance with the evidence received from the notary's office from the delegation in the northwest. When the task is accomplished in Colonias, the commission will institute the same proceedings in the departments of Beni and Santa Cruz.

DOMINICAN REPUBLIC.

By an Executive decree of the 21st of February last the military Government has established the following modifications in the commercial code of the Republic: (1) Companies heretofore denominated compañías anónimas (corporations) will hereafter be known as compañías por acciones. Such companies as desire to change their names in accordance with the new nomenclature will do so in conformity with the statutes of the code which stipulate the method

for making changes in names of corporations. (2) Articles 29 and 30 of the commercial code are repealed. (3) The compañías por acciones may adopt whatever names the partners choose, providing that no company by the same name has been established already, and providing it contain the term compañía por acciones or the letters C. por A. (4) The names of companies of limited partnership shall contain the letters C. en C. por A. (5) Article 42 of the code is modified to read: In announcements and advertisements compañías por acciones or companies of limited partnerships will use their legal names as well as the ones by which they are generally known, and if they have exercised the prerogatives granted by article 62 of the code they shall add the words "De capital variable" (variable capital). (6) All compañías por acciones and companies of limited partnership are to be regarded as commercial, whatever may be their object as set forth in their rules and by-laws.

HAITI.

On February 26, 1919, a law was promulgated establishing a NATIONAL BOARD OF PUBLIC HYGIENE. According to the law this board will control all existing boards of public health, quarantine, hospitals, etc.

A law promulgated on December 16 last, and published in the official newspaper on March 1, 1919, places the PRISONS under the direction of the gendarmerie and establishes new rules regarding the treatment of prisoners.

NICARAGUA.

By a recent legislative enactment which will go into effect January 1, 1920, FOREIGN DIPLOMATIC REPRESENTATION must be conducted by officials resident within the country. Owing to the nature of their mission, representatives of the Vatican are exempt from the ruling. Neither does it apply to diplomatic agents already recognized with residence outside of Nicaragua, but their successors must comply with it. The decree includes consular agents also.

By legislation of January 2 it was enacted that the presidency and vice presidency of the SUPREME COURT OF JUSTICE will be held in succession for one year, beginning January 1, 1919, by the justices alternating in the order of their election.

The appellate court and corresponding offices will be regulated in the same manner.

URUGUAY.

A presidential decree of January 22 authorizes the insurance of NATIONAL REALTY in the State Securities Bank (Banco de

Seguros del Estado) against fire. By the same decree automobiles, trucks, and other vehicles for motor transportation in the service of public works are also insured against all loss, risk, and liability for damages.

On February 1 the President of the Republic promulgated the law passed by congress on January 23 relative to **MILITARY RANK**.

Rules governing **DIPLOMATIC REPRESENTATIVES IN CHARGE OF LEGATIONS** in the absence of accredited diplomats were fixed on February 11 of this year. According to the rulings the person in charge ad interim is entitled to 50 per cent of the regular diplomatic disbursements, and the full rent and expenses of the house assigned to the accredited diplomat during the entire term he remains in charge.

The **OLD-AGE PENSION LAW**, passed by congress February 10 was promulgated on the 11th. According to its terms, every person 60 years of age or older, who is totally incapacitated for self-support, is to receive from the State a minimum pension of 96 pesos annually or its equivalent in direct or indirect assistance. Foreigners or naturalized citizens must have lived in the country at least 15 years in order to enjoy the pension. To meet the pensions, taxes have been fixed for owners of real estate worth not less than 200,000 pesos, employers of laborers, and on imported or domestic playing cards, certain liquors, and imported wines.

A law of January 14 provides that the discoverer of a new use for national resources or of the most profitable use thereof shall hold the **INDUSTRIAL RIGHTS OF EXPLOITATION** of such resources for a time and according to the conditions established in the law of November 13, 1885. Such persons as find an industrial use for parasitic plants or animals deemed injurious to agriculture or stock raising and which have been considered a pest, may have the privilege extended for an additional period equal to half the time originally allotted them.



PUBLIC INSTRUCTION AND EDUCATION

ARGENTINE REPUBLIC.

The Argentine Government has offered six SCHOLARSHIPS TO NICARAGUAN STUDENTS through the Government of Nicaragua. Two of the scholarships are for the school of agriculture of Tucumán and four for the school of agriculture at Mendoza.

Señor Jorge Duchout, consulting engineer of the College of Physical, Natural, and Exact Sciences of Buenos Aires has made a DONATION OF 2,500 volumes to the library of the institution. The faculty has voted to keep the books in a special section known by the name of the donor.

BOLIVIA.

The chamber of deputies recently authorized the expenditure of a sum of money for the establishment of a SCHOOL OF PARLIAMENTARY STENOGRAPHY in La Paz. The bill was passed owing largely to the influence of the chief clerk, Señor Agustin de Rada. The school was established February 1, 1919, with courses in shorthand, parliamentary composition, etc.

A presidential decree of January 24 last, provides for closer relations between the School of Arts and Crafts of Cochabamba, in which there is a COURSE IN SILK CULTURE, and the silkworm growers of the country. The board of directors of the school will furnish proper seeds to mulberry tree growers who have demonstrated their efficiency.

After receiving the degree of bachelor, Miss Amelia Chopitea Villa has registered in the College of Medicine, where she is the first WOMAN TO STUDY MEDICINE in Bolivia.

The Argentine Government has granted eight fellowships to Bolivian students in schools of agriculture and three for technical schools. One student will be selected from every department of Bolivia for the former scholarships, and the three latter will be given to young men from the districts of Chuquisaca, La Paz, and Santa Cruz.

Recently a YOUNG WOMEN'S ACADEMY was established in the city of Potosí with a limited number of students. At the completion of the course given in secondary instruction the title of bachelor will be conferred.

CHILE.

The executive board of the SOUTHERN UNIVERSITY AND CLINIC HOSPITAL which has recently been established by private funds and fiscal aid in Concepción has opened university courses in the following subjects: First-year dentistry, industrial chemistry, first-year pharmacy, preparatory course in higher mathematics, and first-year pedagogy (in English).

DOMINICAN REPUBLIC.

By presidential decree of February 24, 1919, the AGRICULTURAL EXPERIMENT STATION was declared a public utility and its expansion was provided for, to be conducted under the direction of the department of agriculture and immigration. The land necessary for its enlargement will be purchased or condemned by legal methods.

According to a report of the secretary of agriculture and immigration the Government is taking necessary steps preliminary to the establishment of a COLLEGE OF AGRICULTURE on land joining the experimental station in the city of Santo Domingo. The building to be erected will accomodate 36 or 40 students, one being sent from every province annually to take advantage of the training here offered. These students will have only their board and laundry to pay for, since the Government is to defray the expenses of the three-year course, including therefor instruction, general equipment, books, etc. The college will operate in connection with the adjoining experimental station, the advantages of which will be of great benefit to the students.

A SCHOOL OF COMMERCE has been established in Santo Domingo under the direction of Señor Miguel A. Pardo. Bookkeeping, commercial and general arithmetic, English, Spanish grammar, shorthand, and typewriting will be among the branches taught.

GUATEMALA.

The Government has issued the following regulations concerning the "ESTRADA CABRERA UNIVERSITY" recently founded by governmental decree: All higher professional instruction will be supervised by the national university and the corresponding faculties. The university will be governed by a superior council, composed of the president, elected by the professors, and the deans of the several colleges. The university for the present will be made up of the colleges of law, social and political sciences, medicine and surgery, mathematics, natural sciences and pharmacy, philosophy, literature, and speculative sciences, and agronomy. Every college will have a board of directors for internal government. Aside from the inspection of professional instruction, the superior council will determine the branches to be taught by the various professors and will formu-

late the university rules. The colleges are separate and distinct and independent in internal administration.

Señor Lic. Don Mariano Cruz and Señor Lic. Don Salvador Falla were elected PRESIDENT and VICE PRESIDENT, respectively, OF THE ESTRADA CABRERA UNIVERSITY.

HAITI.

Under date of February 25, 1919, the secretary of public instruction issued the new RULES AND REGULATIONS governing the direction and administration of the lycées nationaux (high schools). These rules and regulations were published in *Le Moniteur*, the Haitien official gazette, of March 8, 1919.

HONDURAS.

By a presidential decree of February 1, 1919, 31 young men from various towns of the Republic were given SCHOLARSHIPS to study pedagogy in the men's normal school of Tegucigalpa. They have agreed to serve the Government in whatever capacity designated upon graduation. It is probable that they will be sent to teach in the primary schools of their native cities for a length of time equal to that spent in studies at governmental expense.

NICARAGUA.

The President has authorized the sending of Señor Pedro J. Cerna Martínez to the United States at the expense of the Government TO STUDY MEDICINE, making a specialty of public and household hygiene.

By legislation of the 7th of February, \$2,000 has been appropriated for the establishment of a YOUNG LADIES' SEMINARY in Managua under the direction of some religious order. The money will be presented to the committee of young women organized for the purpose of founding the school.

By legislative enactment of February 7 the Executive was authorized to send Señor Alejandro Alonso Rochi abroad at Government expense to study PAINTING in the centers of fine arts.

PERU.

In order to foster primary education and encourage all children of school age to matriculate in governmental or private schools, and thus generalize the advantages of early education, now enjoyed by only a small number of children, the President has issued a decree creating NATIONAL JUVENILE GUARDIANSHIP, providing that in the capital of every department or coast province a guardianship board be organized, in charge of a president, two vice presidents, three members, a treasurer, and a secretary, all of these officers to be women. This board will have entire governing control.

By a vote of the general directorate of public instruction a course of studies preparatory to professional education is to be established in the WOMEN'S NORMAL SCHOOL OF LIMA.

A PRACTICAL SCHOOL OF AGRICULTURE has been established in Santa María district of the Campiña de Huacho, in which free practical instruction in agricultural subjects will be given to residents of that section. The system of instruction to be employed is practical and intensive.

The press of Lima announces that the art of teaching MUSICAL SHORTHAND, by which any musical conception of a composer may be transcribed to paper with the velocity of thought itself, was introduced by Señor Esteban M. Cáceres, the Peruvian professor of music and author of various interesting articles on the teaching of music and esthetics. The theory of musical shorthand was completely unknown until very recently.

SALVADOR.

The SCHOOL OF GRAPHIC ARTS reports an enrollment of 313 pupils in the year 1918, with an average attendance of 190. During the same year one diploma was granted in topographical drawing, two in photoengraving, and two in typewriting.



GENERAL NOTES

ARGENTINA.

The President of the Republic officially received Señor Dr. Don Amador del Solar, MINISTER FROM PERU, late in February.

The President of the Buenos Aires charities association (Sociedad de Beneficiencia de Buenos Aires) has been notified that Señorita Doña Angela Massini de Silveyra left in her will a LEGACY OF 300,000 pesos in trust to the association, to be administered for the foundlings asylum and the hospitals of the city. The amount will shortly be delivered to the association.

The Syndical Chamber of Commerce of Buenos Aires has presented to its President, Señor Eugenio C. Noé, an ALBUM signed by over 500 of the leading industrial and commercial men of the city, in token of Señor Noé's efficient leadership and his zeal in everything pertaining to the organization.

The director general of immigration reports the following statistics in regard to IMMIGRATION in 1918: Passengers arrived from beyond the sea, 5,096; from Montevideo, 59,274; total, 64,370,

Immigrants from overseas, 13,701; from Montevideo, 36,961; total, 50,662. Of the oversea immigrants, 9,188 were Spaniards, 1,076 Argentinians, 855 Italians, 761 French, 320 Portuguese, 288 Brazilians, 235 Russians, 195 North Americans, 169 English, and 614 of various nationalities.

BOLIVIA.

On January 30 the President appointed Dr. Ismael Vázquez MINISTER OF ADMINISTRATION AND JUSTICE.

The war department has named Dr. Claudio Sanjinés T. DIRECTOR GENERAL OF SANITATION IN CANTONMENTS.

The minister of administration and justice has authorized Señor Mario G. Araoz to publish a "CODE OF LAWS and important decrees of Bolivia," the district attorney of La Paz to be responsible for the authenticity of the subject matter and its accuracy.

Señor Julio Zamora has been named minister plenipotentiary on SPECIAL MISSION TO THE UNITED STATES, to be accompanied by Señor Jorge de la Barra, attaché.

BRAZIL.

The ARCHÆOLOGICAL AND GEOGRAPHIC INSTITUTE OF PERNAMBUCO has been declared an institution of public utility by recent legislation.

Señor Barbosa Lima and Señor Andrade Pinto have been elected PRESIDENT and director of traffic, respectively, of the Brazilian Lloyd Line.

By legislative decrees, ratified by the president, the Brazilian diplomatic representations in England and Italy have been raised to EMBASSIES, beginning with the present year.

Press reports state that the population of the city of SAO PAULO, which in 1900 was 239,820, at the end of 1918 had reached 504,278—an increase of 115 per cent in eight years. In 1900 there were 22,407 buildings in the city, valued at 33,306 contos (conto paper=\$270 United States gold). In 1918 fully 55,356 buildings were reported, valued at 89,456 contos.

CHILE.

The following DIPLOMATIC NOMINATIONS have been made recently by the President: Don Emilio Bello Codesido, minister to Bolivia; Don Diego Dublé Urrutia, minister to Colombia; and Don Julio Garcés, minister to the Republics of Central America.

COLOMBIA.

According to the census recently completed the POPULATION OF THE DEPARTMENT DEL VALLE is 274,800—an increase of 70 per cent in the past six years. The capital city of Cali has a population of 45,500.

The centenary committee of Boyaca has opened a CONTEST in the flower festivals ("Juegos Florales") in which three prizes will be bestowed—one for the three best epic poems; another for the best original treatise on some scientific, artistic, or industrial subject; and the third for the most practical invention of any kind.

By a decree in accordance with law 60 of 1918 the PENAL COLONY OF META is established for persons found guilty of robbery in the Departments of Cundinamarca and Boyaca, the District of Meta, and the comisariats of Arauca, Vichada, and Vaupes.

The President has issued orders for the establishment of TELEPHONE SERVICE between Bogota and the towns which the administration general of telegraphs may determine, over existing telegraph lines, the tolls for telephone messages and calls being the same as those now collected for telegraphic service.

According to the statistical report of the MUNICIPAL STREET RAILWAY OF BOGOTA, the number of passengers accommodated in 1918 was 6,895,730; the gross receipts, \$345,091; the expenditures, \$159,953; and the net income, \$185,137.

The board of directors of the SABANA RAILWAY has ordered the purchase of rolling stock and rails necessary for the extension of the line to the Magdalena River.

The TOLIMA RAILWAY extension has proceeded beyond the Gualanday slope, leaving only the Ibague plain to be traversed. Although this plateau is at a higher elevation than any point between Flandes and Gualanday, the minister of public works expects the line to be completed to Tolima, the capital, by August 7, 1919.

The President has appointed a SPECIAL DIPLOMATIC MISSION in Paris to represent Colombia at the Peace Conference and League of Nations. The mission is composed of Dr. Ignacio Gutiérrez Ponce, minister from Colombia near Great Britain; Dr. Francisco J. Urrutia, minister from Colombia near Switzerland; and Dr. Antonio José Restrepo, counselor of the latter legation.

VITAL STATISTICS of the city of Medellin reveal a total of 2,357 births in 1918 and 1,935 deaths—an increase of 422 in the population. During the same year 328 marriages were recorded.

On February 9 the new STATION OF MEDELLIN was formally opened in the presence of the President of the Republic, who visited the Department of Antioquia for the purpose of witnessing the opening celebration.

The press of Colombia announces that in the Gaceta Oficial of Bogota of October, 1852, the patent for the MANUFACTURE OF SUBMARINE BOATS was published. The submarine was said to be invented by Lambert Alexander, from whom the patent privileges passed to Gen. Tomás Cipriano de Mosquera; hence Colombia was the first South American country to attempt the establishment of submarine service.

On February 22 the President of the Republic received the new ENVOY EXTRAORDINARY AND MINISTER PLENIPOTENTIARY of the United States to Colombia, His Excellency, Mr. Hoffman Philips, in public audience.

By a presidential decree of February 19, Gen. Don Rómán Gonzalez Valencia, ex-President of the Republic and one of the leaders of the conservative party, was appointed MINISTER PLENIPOTENTIARY of Colombia to Venezuela.

COSTA RICA.

GENERAL ELECTIONS were held throughout the Republic March 2, 1919, for members of congress and for mayors of the municipalities. The election was of especial interest inasmuch as very important matters are to come before the next congress and the municipal authorities, in accordance with the constitutional regulations contained in the new "Carta Fundamental" issued by congress two years ago.

The municipality of Cartago has ordered a bronze BUST of Don José Francisco de Peralta, the eminent priest of that city, to be executed by Don Juan Ramón Bonilla, the Costa Rican sculptor. It is to be placed in Central Park, Cartago.

The President has named Don Ricardo Mora Fernández to succeed Don Santiago Güell as GOVERNOR OF THE PROVINCE OF SAN JOSE in view of the resignation of the latter.

The following officials have been elected to the board of directors of the RED CROSS OF COSTA RICA for the present year: President, Señor Francisco Segreda; vice president, Dr. Solón Núñez; secretaries, Señors Elías Granados and Macabeo Vargas; attorney, Señor Manuel Vicente Blanco; and treasurer, Señor Adriano Arió. Besides those named, there will be 10 members of the governing board, including young women and matrons.

The department of public works has initiated a program preliminary to the CONSTRUCTION and repair of bridges, roads, and highways, which will without doubt contribute considerably to the development of the country. Among other projects is that of an automobile highway to extend from Alajuela to Cartago.

CUBA.

In an interview recently held between the President of the Republic and the postmaster general it was agreed to establish AERIAL POSTAL SERVICE between la Habana and Santiago de Cuba. The Government of Cuba is negotiating with the Governments of Haiti, Dominican Republic, and Jamaica relative to the establishment of similar service between Habana, eastern Cuba, Kingston, Haiti, and Santo Domingo. It is expected that powerful machines for service on these routes will be ordered within a short time.

Maj. Gen. Enoch H. Crowder, the distinguished military man and lawyer, is at present in Habana with the purpose of revising the ELECTORAL LAW framed by him during the Magoon administration.

The 1919 FINE ARTS ASSEMBLY was opened in the Academy of Arts and Sciences on March 24 with an address by Dr. José M. Collantes, who sketched briefly the history of the organization.

In Habana an ADVERTISING CAMPAIGN is being conducted in the interests of the evening daily paper, *La Nacion*, founded by Don Manuel Márquez Sterling, the journalist, who will continue as its editor.

DOMINICAN REPUBLIC.

By an order of the secretary of the interior and police, no official or member of the military corps of the Republic may be connected with MUNICIPAL INVESTIGATIONS, either officially or otherwise, except upon the receipt of orders to that effect from the secretary.

On February 28, 1919, the HIPPODROME of the city of Santo Domingo was formally opened with horse races. The hippodrome, measuring 850 by 20 meters, was erected by the Deportiva Stock Company for sports of various kinds. The stadium is surrounded by comfortable benches and tiers of boxes.

Following orders from the Government of the United States, Rear Admiral Thomas Snowden assumed charge of the military government of Santo Domingo and the military representation of the United States in Haiti on February 25 last. The new governor has declared the laws and regulations dictated by his predecessors in force.

The founding of a NATIONAL COLONY OF LEPERS under the direction of the department of health of the interior and police was authorized by a law of February 15, 1919, and the sum of \$80,000 gold appropriated for its establishment.

On February 15 the establishment of a NATIONAL PENITENTIARY was ordered, the institution to be under the direction of the secretary of justice and public instruction. An appropriation of \$100,000 was made to cover the cost of construction.

The superior council, provincial delegations, and alternate delegations of the MEDICAL BOARD were dissolved by a decree of February 6, 1919. The duties formerly exercised by them will now be performed by the superior health commission, the chief officials of the various provinces, and by the health officials of the district.

The board of directors of the COLLEGE OF LAW has been appointed as follows: President, Lcdo. Francisco J. Peynado; vice president, Lcdo. Enrique Enríquez; librarian, Lcdo. M. de J. Troncoso de la Concha; treasurer, Lcdo. Ramón O. Lavatón; secretary, Lcdo. Joaquín E. Salazar; and assistant secretary, Lcdo. Eudaldo Troncoso.

ECUADOR.

Most of the material has arrived in Guayaquil for the WIRELESS TELEGRAPH system for which the Government of Ecuador contracted with the French Radio Electric Co. (Sociedad Radio Eléctrica Francesa). The remainder of the material will arrive shortly, together with the engineers who are to install the plant.

The municipal council of Quito has voted to receive bids for the construction of an ELECTRIC LIGHT AND POWER PLANT from native and foreign concerns. The city is ready to establish the plant either directly as a municipal public work, itself carrying out the plans agreed upon and contracting for machinery and necessary materials, or through some private company, in which case the city would become a stockholder in whatever company might be organized to carry through the enterprise.

On February 11 the President appointed Senor Don Miguel G Hurtado MINISTER OF THE TREASURY.

Don Rafael Andrado Lala, captain in the Ecuadorean Navy, has invented an apparatus of great importance in nautical enterprises, which he patented in the United States after a series of successful trials. The ECUADORIAN INVENTION provides vessels with an apparatus that verifies automatically the course the ship is to take, as predetermined before sailing, while a signal or signals will give warning of deviation from this course to the captain without knowledge of the under officials. Such a mechanism will make accidental or criminally intentional deviations impossible and insures the safety of passengers and crew.

At present 621 day laborers are at work on the Tumbaco section of the QUITO-ESMERALDAS RAILWAY and on the northern section, 515.

The Rev. Dr. Manuel María Pólit succeeded the late Bishop Gonzalez Suarez as ARCHBISHOP OF QUITO on January 21, 1919.

Having received an invitation to take part in the Congress of American History to be held in Río in 1922, the Ecuadorian Society of History has opened a CONTEST for the best theses presented by its members upon the following topics: "Prehistoric Ages," "Colonial History," "Independence," and "The Republic." The works which receive the prize in this contest as well as the report of the society will be presented at the Congress in Río.

The sum of 3,500 pesos is to be appropriated fortnightly for the completion of the SEWER SYSTEM and potable water supply now under construction in the capital.

GUATEMALA.

Señor Don José Rodríguez Cerrea has been appointed CONSUL GENERAL of the Republic of Guatemala in San Francisco, Calif.

The firm of Charles E. Doddige & Co., of New York, proposes to invest \$20,000,000 gold in the RECONSTRUCTION OF GUATE-

MALA. The company will build houses costing from \$1,000 to \$200,000 or more, so that any person may buy a home upon the payment of 10 per cent of the total price of the house, the remainder to be paid in installments extending over a long period.

By a presidential decree of February 21, 1919, the suspension of **INDIVIDUAL SECURITIES** created by decree No. 735 was ordered.

HAITI.

M. André Faubert, who has been appointed **CONSUL GENERAL** of Haiti in New York, left Port au Prince a few days ago for the United States to enter upon his new duties.

HONDURAS.

In February the **NEW PUBLICATION** known as the *Revista Científico-Militar*, the official organ of the military academy of Tegucigalpa, was put in circulation. The magazine is edited by the officers of the institution and will publish articles written by professors of the academy upon subjects of interest and use to the students, and is designed to take the place of a textbook in courses where an adequate text is lacking.

The minister of war in the yearly report just published gives an account by Col. Pedro Rivas, professor of geography, military history of Central America, and military history of Honduras in the military academy, concerning the **SCIENTIFIC EXCURSION** conducted by students of the institution in March and April, 1918, to the ruins of Tenampúa and the Valley of Comayagua. Valuable geographical and archeological data are embraced in the report.

The municipalities of the Republic will contribute toward the erection of a **MONUMENT TO LAVARRE** in the capital of Guatemala as their share in the celebration of the first centenary of Central American independence. It will be remembered that Don Mariano de Lavarre was the "first mayor" of Guatemala City when he proclaimed the freedom of the country on September 15, 1821.

On February 12, 1919, Don Andrés Soriano was appointed **MINISTER OF WAR AND THE NAVY**. Until recently Col. Soriano held the post of consul general of Honduras in New York.

The Vaccaro Bros. Co. is about to establish a **POSTAL AERIAL SERVICE** between Honduras, Nicaragua, and the United States. The city of Tegucigalpa, the Honduran capital, is to be the base of the new service.

By a decree of January 25, 1919, the President declared the death of Dr. Francisco J. Mejía, secretary of state, an occasion for **NATIONAL MOURNING**. Dr. Mejía had also been minister of war and navy and minister of administration and justice.

NICARAGUA.

According to the terms of a contract signed between the municipality of Managua and Senor Malcolmson, work is soon to be begun

on the **MACADAMIZED PAVING OF THE STREETS OF MANAGUA**. The work will be under the direction of Senor Hocke, a prominent engineer, and it is estimated that 150 yards per day may be completed.

On December 31, 1917, the **POPULATION OF NICARAGUA** was 746,000. At that time Managua had a population of 41,538 and a rural population of 17,462; León an urban population of 73,520 and rural of 17,007; and Granada an urban population of 20,133 and rural of 8,211.

The minister of public works has named a committee to make a detailed investigation of the **WATERFALLS** on the Mico, San José de los Remates, Murra, and other rivers with the object of obtaining electric power for various industrial establishments which it is proposed to establish in the cities of Managua, Masaya, Granada, and Rivas, providing the water power be found sufficient to warrant their installation.

The following delegation is representing Nicaragua in Paris at the **PEACE CONFERENCE**: Don Salvador Chamorro, delegate; Don Pedro Cabrera and Don Carlos Chamorro Bernard, secretaries; Don Luis N. Jiménez, attaché; and Dr. Salvador Guerrero, consulting counselor.

PARAGUAY.

Senor don Silvano Mosqueira, ex chargé d'affaires from Paraguay to Brazil, has been named by the President for **CHIEF OF THE POLITICAL-DIPLOMATIC SECTION** of the ministry of foreign relations.

A recent presidential decree fixes the **CEREMONY** for the reception of diplomatic representatives accredited by foreign powers before the National Government.

PERU.

The President has made further stipulations to the decree of July 31, 1846, concerning the **UNIFORM TO BE WORN BY DIPLOMATIC AND CONSULAR AGENTS OF PERU**. According to the late decree, all such representatives, of whatever rank, are to wear, as a social uniform, a dark blue dress coat with lapel of the same material, velvet collar of the same color, gold buttons bearing the arms of the Republic, white waistcoat with similar buttons of a smaller size, and trousers of the same color as the coat.

The general national budget is hereafter to include an item of 1,150 pounds gold for the **UCAYALI MISSIONS**.

On February 23, 1919, an enthusiastic **PUBLIC GATHERING IN HONOR OF PRESIDENT WILSON** was held in Lima under the auspices of the Peruvian Federation of Students. Committees from laboring and manufacturing centers, guilds, recreational organizations, and representatives of the principal business houses of the country were present.

Dr. Amador F. del Solar and Dr. Víctor Andrés Belaúnde have been named envoys extraordinary and **MINISTERS PLENIPO-**
TENTIARY to the Republics of Argentina and Uruguay, respectively.

SALVADOR.

Dr. Don Pío Romero Bosque, Dr. Don Francisco Martínez Suárez, and Dr. Don Baltazar Estupillán were elected first, second, and third vice presidents respectively, for the year 1919 by the national legislative assembly, according to constitutional procedure.

President Meléndez's **CABINET** is composed of the following members: Minister of foreign relations, justice, public instruction, and charity, Dr. Juan Francisco Paredes; minister of administration, industry, and agriculture, Dr. Miguel Tomás Molina; minister of the treasury and public credit, Don José E. Suay; and minister of war and the navy, Dr. Pío Romero Bosque.

URUGUAY.

On February 13, 1919, the envoy extraordinary and **MINISTER PLENIPO-**
TENTIARY OF COLOMBIA, Señor Dr. Roberto Ancízar, was received in public audience before the Uruguayan Government.

A decree of January 17 delegates various new functions to the **MINISTRIES** of public instruction, industries, and public works.

In virtue of the dispositions of the law of May 15, 1911, the **OFFICE OF TELEGRAPHIC CODES AND COMMUNICATIONS** is to be under the direction of the ministry of the interior.

The President has ruled that a **CONGRESS OF INSPECTORS** employed by the national bureau of labor shall be held during the fore part of February in Montevideo annually.

A presidential decree of February 11 establishes the rules governing **DIPLOMATIC OFFICIALS** in charge of legation offices.

A commission composed of the president of the press association and various other competent persons has been selected to pass upon the artistic value of the model of the **MONUMENT** to be erected to the Barón de Río Branco in Montevideo. The model under consideration is the work of the Uruguayan sculptor, Señor Pablo Mañé.

In accordance with the law by which the department of **MILITARY JUSTICE** was reorganized, the higher officials have been selected for the supreme court of justice, the superior council of war and navy, and the permanent war council, created by that law.

Work on the President Wilson drive (Rambia Presidente Wilson), begun late last year, is proceeding rapidly and it is predicted that this, one of the widest thoroughfares of the territory, connecting all the beaches on the east coast, Ramírez, Pocitos, Buceo, Malvín, and Carrasco, will increase the popularity of the district with tourists and compare favorably with European boulevards.

In spite of the scarcity of materials and their high prices, the bureau of municipal works of Montevideo issued 5,062 BUILDING PERMITS during the past year.

Volumes VII and VIII of the REVISTA DEL ARCHIVO GENERAL ADMINISTRATIVO have been published. The contents will be of great value to students of Uruguayan history.

The section charged with the VERIFICATION OF CONSULAR DOCUMENTS last year examined 121,601 documents, which, after being reviewed by them, were copied in the special registers kept by the section.

By a presidential decree issued January 31, 1919, the SECOND CHILDREN'S CONGRESS OF AMERICA, previously postponed, is to be held in Montevideo May 18 to 25. The governments of all the American nations will be notified to this effect.

VENEZUELA.

By a presidential decree of February 19, 1919, Dr. José Santiago Rodríguez is made AGENT OF THE REPUBLIC ON A SPECIAL MISSION to the United States and Europe, with the object of studying the economic conditions of international commerce and maritime transportation in the several countries he visits. The press of Caracas considers Dr. Rodríguez's mission of the utmost importance to the economic future of his country.

On February 20 last the LEGISLATURES of the various States were convened and the elections of corresponding administrative sections were held.

A COUNSELLOR OF THE LEGATION has been appointed to the Venezuelan legation in Switzerland, and a special minister plenipotentiary with extraordinary powers in Colombia, to which post Dr. Caracciolo Parra Pérez has been appointed.

Dr. Isaac Capriles, former fiscal inspector of the banks of Caracas and Venezuela, has been made POSTMASTER GENERAL.

A STATUE TO DON FRANCISCO ANTONIO ZEA, Colombian writer and patriot, has been erected in Bolívar City in commemoration of the first centenary of the congress of Angostura, of which he was president.

Señor Henry Lord Boulton, one of the most prominent business men of Venezuela, has recently presented an excellent ASTRONOMICAL INSTRUMENT, made at a famous factory of astronomical and meteorological instruments in Dublin, Ireland, to the National Government, together with the observatory dome. The instrument consists of an equatorial telescope of 450 magnitude, the lens being 8 inches in diameter. Señor Boulton has for some years interested himself in astronomy and it was owing chiefly to him that the astronomical and meteorological observatory was established on the Colina Cajal of Independencia Avenue in Caracas in 1888.

SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED TO MARCH 12, 1919.

Title.	Date.	Author.
ARGENTINA.		
Imports of coke during the last eight years, 1910-1917.....	1918. Nov. 13	W. Henry Robertson, consul general at Buenos Aires.
Requirements for the practice of dentistry in Argentina.....	Nov. 26	Wilbert L. Bonney, consul at Rosario.
Market for tin plate in Rosario.....	do.....	Do.
Cotton in northern Argentina.....	do.....	Do.
Sugar-cane industry in Argentina.....	Dec. 5	Do.
Argentine imports of textiles for 1917 and 3 months of 1918.....	Dec. 11	W. Henry Robertson.
Market for toys and games in Argentina.....	Dec. 14	Wilbert L. Bonney.
Market for chemical products.....	Dec. 16	Do.
Market for trunks, traveling bags, etc.....	Dec. 18	Do.
Imports of raw cotton.....	Dec. 19	W. Henry Robertson.
Regarding the market for marine motors.....	Dec. 27	Do.
1919.		
Importation of eumin, anise, and other spice seeds.....	Jan. 22	Do.
BRAZIL.		
1918.		
Automobiles and trucks in southern Brazil.....	Nov. 29	Samuel T. Lee, consul at Porto Alegre.
Annual fair at Rio de Janeiro.....	Dec. 6	Richard P. Momsen, vice consul at Rio de Janeiro.
American International Steel Corporation authorized to operate in Brazil.....	Dec. 11	Do.
American Railway Co. authorized to operate in Brazil.....	do.....	Do.
Statistics of imports and exports to and from Pernambuco, Macelo, Cabedello, and Natal for 1916 and 1917.....	Dec. 13	A. T. Haeberle, consul at Pernambuco.
Brick manufacture.....	Dec. 20	Do.
Norwegian lumber company to operate in Brazil.....	do.....	Richard P. Momsen.
Brazil Central Railway to install electric furnace for smelting ferromanganese.....	do.....	Do.
New Brazilian Colonization Co., organized.....	do.....	Do.
Castor bean crop.....	Dec. 28	Chas. L. Hoover, consul at São Paulo.
COLOMBIA.		
1919.		
Market for saccharin.....	Feb. 3	Claude E. Guyant, consul at Barranquilla.
Automobiles, market for.....	do.....	Do.
Stock raising in Colombia.....	Feb. 17	A. J. Lespinasse, consul at Cartagena.
COSTA RICA.		
Coffee industry in Costa Rica.....	Jan. 24	Benjamin F. Case, consul at San Jose.
Tobacco crop report.....	Jan. 25	Do.
CUBA.		
Imports of caustic soda and soda ash during 1918.....	Jan. 17	Paul I. Clugston, vice consul at Matanzas.
Fiber known as "Lengua del Vaca".....	do.....	Do.
Market for steel office equipment.....	Jan. 21	Do.
Market for tractors.....	do.....	Charles S. Winans, consul at Cienfuegos.
Lumber market.....	Feb. 8	H. W. Harris, consul general at Habana.
Paper imports.....	Feb. 10	Geo. A. Makinson, consular agent at Cardenas.
ECUADOR.		
1918.		
Manganese mines in Ecuador.....	Dec. 19	Frederic W. Goding, consul general at Guayaquil.
1919.		
End of peonage in Ecuador, decree of Oct. 20, 1918.....	Jan. 16	Do.
HONDURAS.		
1918.		
Telephone lines in district.....	Dec. 13	John L. Bradley, consul at Puerto Cortes.
Report on slaughtering cattle and preparation of beef for market.....	Dec. 19	Chas. N. Willard, consul at Ceiba.

Reports Received up to March 12, 1919—Continued.

Title.	Date.	Author.
HONDURAS—continued.		
Opportunities for mail order business between the United States and Honduras.	1919. Jan. 2	John L. Bradley.
Transportation facilities.....	Jan. 17	Do.
MEXICO.		
Commercial congress to be held in Mexico in April, 1919.....	Jan. 6	George L. Chamberlain, consul general at Mexico City.
Large sale of ready-made clothing in State of Sonora.....	Jan. 14	Bartley F. Yost, consul at Guayamas.
Market for saccharin.....	Jan. 15	Do.
Market for tractors.....	Jan. 22	Claude I. Dawson, consul at Tampico.
Trade extension—commercial conditions, etc.....	..do..	W. E. Chapman, consul at Mazatlan.
Road improvements in Monterey.....	Jan. 28	Wilbur T. Gracey, consul at Monterey.
Public reading room in Monterey; journals, books, catalogues, or illustrated pamphlets wanted.	Jan. 29	Do.
Public utilities at Monterey.....	Jan. 31	Do.
Agriculture, fertilization of soil, etc.....	Feb. 5	W. E. Chapman, consul at Mazatlan.
Jewelry.....	..do..	Do.
Textiles and cotton fabrics.....	..do..	Do.
Use of Cuban sugar in northern Mexico.....	Feb. 7	Edward A. Dow, consul at Ciudad Juarez.
NICARAGUA.		
Coffee industry in Nicaragua.....	Jan. 14	John O. Sanders, consul at Bluefields.
Slaughtering of cattle and preparation of beef for market.....	Jan. 18	Andrew J. McConico, consul at Corinto.
Price of grazing lands in Nicaragua.....	Jan. 30	John O. Sanders.
Cattle industry in Nicaragua.....	Jan. 31	Do.
PANAMA.		
Coffee cultivation.....	Jan. 7	Julius D. Dreher, consul at Colon.
Motor-car conditions in Panama.....	Jan. 11	Alban G. Snyder, consul general at Panama.
Imports of lumber, wood, and manufactures thereof for 1917.....	Jan. 20	Do.
PARAGUAY.		
The climatic conditions of Asuncion.....	1918. Nov. 28	Henry H. Balch, consul at Asuncion.
Concrete construction in Paraguay.....	Dec. 20	Do.
Importation of lumber, and articles manufactured from wood for 1916.	Dec. 23	Do.
URUGUAY.		
Congress of production in Uruguay.....	Dec. 7	William Dawson, consul at Montevideo.
Telephone service at Montevideo.....	Dec. 9	Do.
Central Uruguayan Railway not to change hands.....	..do..	Do.
Dairy industry.....	Dec. 12	Do.
Market for traveling luggage.....	Dec. 13	Do.
Profit sharing in State industrial institutions.....	..do..	Do.
Bond issue in Uruguay.....	Dec. 16	Do.
Bridge building in Uruguay.....	Dec. 17	Do.
Reference to the sale of lightning rods in district.....	Dec. 19	Do.
VENEZUELA.		
Commercial finance.....	Dec. 7	Homer Brett, consul at La Guaira.
Trade conditions and opportunities for trade development and investment of capital in western Venezuela.	Dec. 13	Emil Sauer, consul at Maracaibo.
Trade and industry in consular district of Maracaibo.....	Dec. 30	Do.
1919.		
Venezuelan plans for public works.....	Jan. 10	Homer Brett.
Poor American packing of plate and sheet glass.....	..do..	Do.
Mining companies operating in district.....	Jan. 18	Emil Sauer.
Cement imports.....	Jan. 20	Do.
Rope imports and prices.....	Jan. 23	Homer Brett.
Regarding the market for steel products.....	Jan. 25	Emil Sauer.
Imports of drugs, medicines, chemicals, etc., 1917.....	Jan. 26	Homer Brett.
Imports of heavy chemicals in district.....	Jan. 27	Emil Sauer.
Tramways in district.....	Jan. 29	Frank Anderson Henry, consul at Puerto Cabello.

REPORTS RECEIVED UP TO APRIL 4, 1919.

Subject.	Date.	Author.
ARGENTINA.		
Exportation of potatoes and beans permitted.....	1918. Dec. 16	W. Henry Robertson, consul general at Buenos Aires.
Concerning the market for player pianos and player music rolls..	Dec. 26	Wilbert L. Bonney, consul at Rosario.
American bank at Rosario.....	Dec. 27	Do.
Approved plans for grain elevators—translation of the decree of Dec. 10, 1918.	Dec. 28	W. Henry Robertson.
Official estimate of areas under cereals, peanuts, and cotton.....	1919. Jan. 4	Do.
Road race at Rosario.....	Jan. 7	Willbert L. Bonney.
Market for bakers' machinery in Rosario.....	Jan. 10	Do.
Norwegian bank for Argentina.....	do.	W. Henry Robertson.
Exemptions from Executive decree regulating the exportation of metals, manufactures, etc., under law No. 9652.	Jan. 14	Do.
Destination of Argentina's principal exports for 1918.....	Jan. 31	Do.
Argentine foreign trade during the first half of 1918 with special reference to imports of textiles.	Feb. 1	Do.
BRAZIL.		
Dissolution of Rio de Janeiro labor union.....	1918. Dec. 5	Richard P. Momsen, vice consul at Rio de Janeiro.
Assets of Brazilian banks show increase.....	1919. Jan. 2	Do.
British engineering mission to visit Brazil.....	Jan. 4	Do.
Financial statement of Dutch foreign bank in Rio de Janeiro.....	Jan. 8	Do.
Standing army of Brazil limited for the coming year, decree of Jan. 6, 1919.	do.	Do.
Activities of Government bank in Rio de Janeiro.....	do.	Do.
New patent regulation of Brazilian Government.....	Jan. 10	Do.
Budget of expenditures of Brazilian Government during year 1919	do.	Do.
Brazilian college to teach English.....	Jan. 11	Do.
New bids are opened for furnishing coal for central railways of Brazil.	Jan. 17	Do.
Brazilian diamond mining company organized.....	Jan. 23	Do.
Congress of Brazil passes workmen's compensation law (translation of decree No. 3,724 of Jan. 15, 1919).	do.	Do.
Possible new steamship line between Brazil and Holland.....	Feb. 4	Geo. H. Pickerell, consul at Para.
Brazil nut crop.....	Feb. 5	Do.
American corporation to operate in Brazil.....	Feb. 13	Augustus I. Hasskarl, vice consul in charge at Rio de Janeiro.
Tin-can industry in Brazil.....	Feb. 14	Do.
Brazilian Government aids in importing thoroughbred animals..	Feb. 17	Do.
COLOMBIA.		
Increase in import duties.....	Jan. 23	Claude E. Guyant, consul at Barranquilla.
Collector of customs at Cartagena instructed to receive American gold coin in payment of duties.	Feb. 5	A. J. Lespinasse, consul at Cartagena.
COSTA RICA.		
Market for dairy machinery undeveloped.....	Feb. 6	Stewart E. McMillan, consul at Port Limon.
Motion-picture theaters.....	Feb. 11	Do.
CUBA.		
Sale of the equipment of the West-India Sugar Co., an American concern, to a Cuban company.	Feb. 6	Charles S. Winans, consul at Cienfuegos.
Sancti Spiritus electric railway project.....	do.	Do.
The imports of gunny sacks for sugar during 1917.....	Feb. 18	Geo. A. Makinson, consular agent at Cardenas.
Meat-packing plants—stock raising.....	Feb. 19	John S. Calvert, consul at Neuvas.
ECUADOR.		
Census and Statistical Office for Guayaquil.....	Jan. 31	Frederic W. Goding, consul general at Guayaquil.
Commerce and industries for month of January, 1919.....	Feb. 10	Do.
GUATEMALA.		
Market for structural steel.....	Feb. 12	E. M. Lawton, consul at Guatemala City.
Coffee plantations.....	Feb. 18	Do.

Reports Received up to April 4, 1919—Continued.

Title.	Date.	Author.
HONDURAS.		
Annual report on commerce and industries of district	1919. Feb. 10	Chas. N. Willard, consul at Ceiba.
MEXICO.		
Lumber and cement in Monterey	Feb. 6	Wilbur T. Gracey, consul at Monterey.
American Chamber of Commerce at Monterey	Feb. 8	Do.
Sale of machinery and hardware in district	Feb. 10	Edward A. Dow, consul at Ciudad Juarez.
Sale of automobile accessories in district	Feb. 14	Do.
Market for candies	..do....	Do.
Decree modifying paragraph No. 64—export duties	Feb. 17	Joseph W. Rowe, vice consul at Mexico City.
Overland transportation in northwestern Chihuahua	Feb. 19	Edward A. Dow.
Possibility of manufacture of paper from white pine	..do....	Do.
Annual report of district for 1918	Feb. 20	Do.
Report on coal mining industry in district	..do....	William P. Blocker, vice consul at Piedras Negras.
Economic conditions in southern Sonora	Mar. 5	Bartley F. Yost, consul at Guaymas.
Report regarding the irrigation of the Juarez valley	Mar. 7	Edward A. Dow.
NICARAGUA.		
Mining companies of Nicaragua	Jan. 29	A. J. McConnico, consul at Corinto.
The monetary unit of Nicaragua	Feb. 8	John O. Sanders, consul at Bluefields.
Imports of chemicals, drugs, and medicines	Feb. 15	Do.
PANAMA.		
The coffee industry in Panama	Feb. 26	A. G. Snyder, consul general at Panama.
PARAGUAY.		
Imports of belting for 1916, 1917, 1918	Jan. 30	Henry H. Balch, consul at Asuncion.
PERU.		
Annual report of Peruvian Corporation for 1918	Jan. 21	William W. Handley, consul at Lima.
American coal in Peru	Jan. 29	Do.
VENEZUELA.		
Tramways in district	Jan. 5	Emil Sauer, consul at Maracaibo.
Discovery of new balatá fields	Jan. 29	Homer Brett, consul at La Guaira.
Coffee crop in Puerto Cabello district	Jan. 31	Frank Anderson Henry, consul at Puerto Cabello.
Imports of cotton goods for years 1916 and 1917	Feb. 5	Emil Sauer.
Regarding opportunities for capital and employment in Venezuela	Feb. 21	Homer Brett.



BOOK NOTES

[Continued from the March number of the Bulletin.]

UNITED STATES.

- American library annual 1917-1918. Including list of American libraries of over 5,000 volumes; libraries of Latin America; library schools and short courses; library and book-trade periodicals and organizations; book publication statistics; etc. New York, R. R. Bowker Co., 1918. 43 p. 4°.
- American newspaper annual and directory. A catalogue of American newspapers. Philadelphia, N. W. Ayer & Son, 1919. maps. 1295 p. 4°.
- Annual report, 1918. United Fruit Company, Medical department. Boston, Press of Geo. H. Ellis Co., 1919. 73 p. 8°.
- Annual report of the Philadelphia Museums. The Commercial Museum. For the year 1915.
- Report for the years 1916 and 1917. 4°. 2 pamps.
- Appropriations, new offices, etc. 1918-1919. Sixty-fifth Congress, first session, April 2, 1917, to October 6, 1917. Second session, December 3, 1917, to November 21, 1918. Washington, G. P. O., 1918. 808 p. 4°.
- Are you ready for peace? (Printed December 5, 1918.) Reprints from the standard daily trade service. New York, Standard Statistics Company, Inc. 64 p. 8°.
- Cooperation as a necessity in developing foreign trade. An address before the Mississippi Valley Association foreign trade convention, New Orleans, La., January 13, 1919. By R. L. McKellar. no imprint. 8 p. 8°.
- Facilidades ofrecidas a los estudiantes extranjeros en los colegios y universidades de los Estados Unidos la América del Norte. Por Samuel Paul Capen. Traducido bajo la dirección de la división inter-Americana de la asociación Americana para la conciliación internacional por Carmen Torres Calderón de Pinillos. Washington, Imprenta de Gobierno, 1919. illus. 222 p. 8°. (Oficina de Educación. Boletín, 1918. No. 16. Price, 20 cents.)
- If the war ended to-morrow where would you be? (Printed Oct. 21, 1918.) Reprints from the standard daily trade service. New York, Standard Statistics Company, Inc. 1918. 54 p. 8°.
- Latin-American export company. St. Paul, Minn. 7 p. 8°. [Prospectus of the company.]
- Official report of the fifth national foreign trade convention. Held at the Hotel Gibson, Cincinnati, Ohio, April 18, 19, 20, 1918. . . . New York. Issued by the secretary National Foreign Trade Convention Headquarters, 1918. xxx, 667 p. 8°.
- Patterson's American educational directory, Vol. XV. . . . Compiled and edited by Homer L. Patterson. Chicago-New York, American Educational Directory Co., 1918. iv, 908 p. 8°. Price, \$6.
- Report on the international exchange service. Under the direction of the Smithsonian institution. For the fiscal year ending June 30, 1918. Washington, G. P. O., 1919. 10 p. 8°.
- Second report of the Provost Marshal General to the secretary of war on the operation of the selective service system to December 20, 1918. Washington, G. P. O., 1919. xiv, 607 p. 8°.
- Thomas's register of American manufacturers and first hands in all lines. The largest classified reference book in the world; the only one in the United States covering all lines. New York, Thomas Publishing Co., 1919. xx, 920 p. 4°.
- Viaje al país de la libertad. Por M. Luis Jacolliot. Almacén del día, Bogotá. 20 de julio 1910. 102 p. 8°.

VENEZUELA.

- División política territorial del Distrito Federal desde su creación en 1864 hasta hoy. Caracas, Imp. Bolívar, 1917. 22 p. 8°.
- La enseñanza del castellano. [Por] Jesús Semprum. Caracas, Tip. Americana, 1916. 61 p. 8°.
- Estadística mercantil y marítima; semestre de Julio a Diciembre de 1917. Edición oficial. Ministerio de hacienda, Caracas, Empresa El Cojo, 1918. 129 p. 4°.
- Influencia del elemento venezolano en la independencia de la América Latina. Por el Doctor Pedro Manuel Arcaya, 1911. Caracas, Imprenta Nacional, 1916. 20 p. 8°.

Ligeras apuntes sobre morfología médica. Contribución al estudio de los cuatro tipos humanos en Venezuela. [Por] Jesús Sanabria Bruzual. Caracas, 1919. 11 p. 8°.

Una vista a San Mateo el 25 de junio de 1916. Publicación hecha bajo los auspicios del señor Doctor Ezequiel A. Vivas. Caracas, Lit. y Tip. del Comercio, 1917. front. port. pl. map. 15 p. 8°.

GENERAL BOOKS.

Actas memorias y proyectos de las sesiones de la Habana (Segunda reunion de instituto) 22 a 27 de enero de 1917. Instituto Americano de Derecho Internacional. New York, Oxford University Press, 1918. xxxvi, 383 p. 4°.

America during and after the war. By Señor Don Ignacio Calderon. Washington, 1918. 8 p. 8°.

Asociación internacional Americana. Los Estados Unidos ante las naciones Americanas. Discurso por Dr. César Gondra, Buenos Aires, al 18 de octubre de 1917. Buenos Aires, Talleres Jacobo Peuser, 1918. 8 p. 8°.

Beginners' French reader. By Peter J. Scherer. Yonkers-on-Hudson, World Book Company, 1919. ix, 181 p. illus. 8°.

Catalogue of library of Brevet Lieutenant Colonel John Page Nicholson. Relating to the war of the rebellion 1861-1866. Philadelphia, 1914. front. 1022 p. 4°.

Department of agriculture. Administration report of the acting director of agriculture for the year 1917. Trinidad and Tobago. Port au Spain. Printed at the Government Printing Office, 1918. 56 p. 4°.

Effects of the war upon insurance, with special reference to the substitution of insurance for pensions. By William F. Gephart. New York, Oxford University Press, 1918. vi, 302 p. 4°. (Carnegie endowment for international peace. Preliminary economic studies of the war. No. 6.)

Elementary Spanish reader. By Aurelia Borquez. Los Angeles. Published by Aurelia Borquez, 1917. illus. 157 p. 8°.

Far away and long ago. A history of my early life. By W. H. Hudson. New York, E. P. Dutton & Company, 1918. front. port. xii, 332 p. 8°.

The financial history of Great Britain, 1914-1918. By Frank L. McVey. New York, Oxford University Press, 1918. iv, 101 p. 4°. (Carnegie endowment for international peace. Preliminary economic studies of the war. No. 7.)

El futuro político de America. Publicada en El Mundo de la Habana, el día 11 de octubre 1918. Alejandro Rivas Vázquez. front. port. 67 p. 8°.

Getting together with Latin America. By A. Hyatt Verrill. New York, E. P. Dutton & Company, 1918. x, 221 p. 8°.

Isagoge historico apologetico general de todas las Indias y especial de la provincia de San Vicente Ferrer de Chiapa y Goathemala de el orden de predicadores. Libro inédito. El general D. José Maria Reina Barrios. Madrid, Tipografia de Tomás Minuesa de los Rios, 1892. 445 p. 4°.

A league of nations. New York, American association for international conciliation, 1919. 132 p. 12°. (January, 1919. No. 134.)

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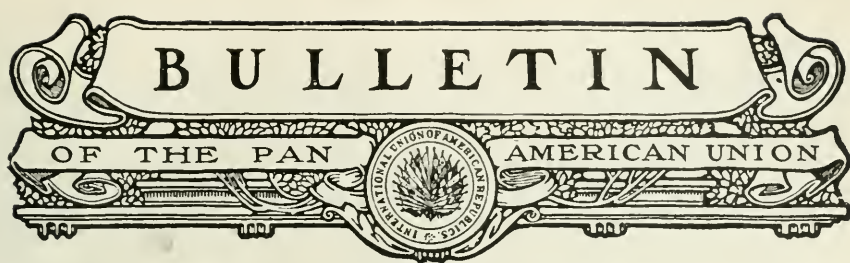
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THE PAN AMERICAN UNION BUILDING, WASHINGTON, D. C.

In this building will be held the sessions of the Pan American Commercial Conference from June 3 to 6, 1919.



VOL. XLVIII

MAY, 1919

No. 5

PAN AMERICAN COMMERCIAL CONFERENCE . . .

AT a meeting of the Governing Board of the Pan American Union, held on April 9, it was voted to authorize the Director General, on behalf of the Governing Board, to call an informal and unofficial Pan American Commercial Conference for the first week of June. A subcommittee of the board, composed of the Mexican ambassador, the minister of Venezuela, and the minister of Ecuador, having carefully considered the plan and purpose of the conference as submitted to them by the Director General, reported favorably to the board and their recommendations were unanimously approved.

In determining upon this step the board recalled the successful Pan American Commercial Conference held under the auspices of the Pan American Union in February, 1911. Having in mind also the great present interest in Pan American trade, they hoped that much good would result to all concerned—governments, organizations, firms, and individuals—from an informal and unofficial but comprehensive exchange of views and of information between the official and unofficial representatives and experts and other interested parties of both North and South America.

At the meeting of the board held May 7 the Director General reported on the progress he had made in the preparations for the conference and on the interest in it that was being shown among those having to do with Pan American trade relations. He recommended that the actual dates for the conference should be Tuesday, Wednesday, Thursday, and Friday, June 3, 4, 5, and 6, with the inaugural session at 10 o'clock on Tuesday, June 3, which would be presided over by the Secretary of State or the Acting Secretary of



DELEGATES TO THE FIRST PAN AMERICAN COMMERCIAL CONFERENCE, FEBRUARY, 1911.

Over 600 leading commercial men; exporters, importers, manufacturers, and foreign trade experts besides many diplomatic and consular officers of the United States and Latin America attended the meetings of the first Pan American Commercial Conference.

State as chairman of the board and addressed by the President of the United States if he should have returned, or, in his absence, by the Vice President, and also by the ranking ambassador and minister of the Latin American diplomatic corps, and one or two other representative men. In the afternoon of the 3d and in the morning, afternoon, and evening meetings of the following days, the conference would be continued in both general and special sessions, with the thought of making them as practical as possible through limiting papers and addresses to 10 minutes in their reading or delivery, and then having a discussion open to all participating in the conference.

Among those to be invited by the Governing Board to attend and participate will be the following: (*a*) The diplomatic, consular, and special commercial and financial representatives and experts in the United States of the Latin American Governments; (*b*) representatives of Latin American firms and houses, Latin American experts, and other Latin Americans interested who are now in the United States; (*c*) such other representatives of Latin American Governments, commercial organizations, and firms who may be able to attend; (*d*) the officials and experts of the different departments and bureaus of the United States Government having to do with Pan-American economic and financial relations; (*e*) commercial and trade organizations, institutions, firms, or houses, or representatives thereof, and individuals in the United States directly interested in Pan American trade.

Among the notable men of the United States who have been especially invited to deliver addresses are the Secretary of the Treasury, Hon. Carter Glass; the Secretary of Commerce, Hon. William C. Redfield; the chairman of the Shipping Board, Hon. Edward N. Hurley; former president of the Emergency Fleet Corporation, Hon. Chas. M. Schwab; Assistant Secretary of the Treasury, Dr. L. S. Rowe; and Hon. Frank A. Vanderlip, president of the National City Bank of New York. In addition to this list will be others of equal distinction, aside from Latin American ambassadors and ministers, consular and commercial representatives, who will discuss the relations of their respective countries to the Pan American situation. Dr. Burwell S. Cutler, chief of the Bureau of Foreign and Domestic Commerce, Department of Commerce, and Julius G. Lay, acting foreign trade adviser of the State Department, have been invited to cooperate for the success of the convention through their own participation and that of other officials of the State Department and Department of Commerce. The various other bureaus of different departments of the United States Government having to do with Pan American trade will also be invited to give their expert aid.

When the convention of the National Foreign Trade Council and that of the United States Chamber of Commerce were held recently in,

respectively, Chicago and St. Louis, announcements were made of this proposed Pan American Commercial Conference, with the result that great interest was manifested by those present in the practical good that might be accomplished by it. The indications now are that there will be a very large attendance at the conference of all those who are in any way concerned with, or engaged in, Pan American commerce. The proceedings will be published, as were those of the conference of February, 1911, and should provide a most complete review of the entire Pan American trade situation.

PRESIDENTIAL INAUGURATION IN URUGUAY . . .

MARCH 1, 1919, marked the beginning of a new era in Uruguayan history, for on that date Dr. Baltasar Brum was elected and inaugurated President of the Republic for the ensuing term of four years, and on the same day the new constitution of Uruguay, a brief summary of which was published in the April number of the BULLETIN, went into effect.

The election of a President by congress took place for the last time, inasmuch as the new constitution provides for the election of the chief magistrate by the direct vote of the people, and for the first time a national administrative board was chosen to cooperate with the president in the discharge of the duties of his office. As a matter of fact, under the present administrative organization the president will only have charge of affairs relating to the departments of the interior, foreign relations, and war and marine, while the administrative board will have charge of the departments of finance, public instruction, and public works.

The ceremonies referred to were held in the Hall of Public Sessions of the University of Montevideo. As a manifestation of esteem for the people of Uruguay naval detachments from the Brazilian cruiser *Barroso*, the English cruiser *Bristol*, and from a number of North American war vessels, formed in dress parade in front of the university building, while on both sides of the university and on part of the front were drawn up mounted guards from the Blandigues regiment of Artigas and a number of other detachments from the republican guard and firemen's organizations.

Seated in the diplomatic section were the special embassies appointed to be present when the new President took the oath of office, and who



THE PLAZA INDEPENDENCIA, MONTEVIDEO, URUGUAY.

In the extreme left of the plaza is the Government Palace, in which are the national administrative and various departmental offices. It was in this building that the newly elected President of the Republic of Uruguay received the congratulations of the special embassies and of the diplomatic corps immediately after the inauguration ceremony.

conveyed to him the good wishes of their respective governments. The heads of the different embassies, accompanied by their staffs, were as follows: Dr. Cyro de Azevedo, Brazil; Robert E. Jeffery, United States; Modesto Guggiari, Paraguay; Dr. Ricardo Mujía, Bolivia; Dr. Carlos Estrada, Argentine Republic; Dr. Roberto Ancizar, Colombia; Dr. Carlos F. Hultgun, Sweden; Enrique Cuevas, Chile; André Auzouy, France; Dr. Victor A. Belaunde, Peru; Amado Nervo, Mexico; and Chin Lin Woo, China. There were also present the persons who comprised the regular missions accredited near the Government of Uruguay in Montevideo.



COLLEGE OF LAW, UNIVERSITY OF MONTEVIDEO.

The inauguration ceremonies of Dr. Baltasar Brum, recently elected President of Uruguay, were held in the Hall of Public Sessions in the College of Law building of the University of Montevideo.

After the members of the administrative board were elected and the oath of office was administered to them, Dr. Baltasar Brum was chosen president by a vote of two-thirds of the representatives of the national assembly. After taking the oath of office the president made an eloquent address in earnest and convincing terms, explaining his views and sketching the program of the Government. Because of the experience which President Brum has had in international affairs while minister of the department of foreign relations of his country, and the general recognition of his pure and fearless Americanism in all of the Republics of the Western Hemisphere, some of the most striking paragraphs of his address are given herewith, freely translated:

In the course of the events of the terrible war which the Central Powers brought upon the world, I took occasion, relying upon the earnest support of Presidents Batlle and Viera, of all the opportunities which were available to the country to bring out its noble idealism and its determined stand for continental solidarity.

And hence I supported the bill which made July 14, the glorious day of heroic France and the culminating date in a long series of events tending to the establishment of human liberty, as well as the bill passed by the National Assembly, which made July 4 the memorable date of the revolution for the independence of the United States of America, national holidays in Uruguay; I intervened in the events caused by the absurd pretensions of the Imperial German Government concerning the submarine blockade, and in the study of the case relating to the sinking of the steamer *Goritzia*; and I believe I correctly interpreted the overwhelming opinion of the country and the firm stand by which she wished to make known her attitude concerning said events.

Answering the communications which our sister Republics of this hemisphere sent us concerning the war, I repeatedly proclaimed, in accord with public opinion, the fraternal sympathy which they inspired in us; and I had the honor of signing the decree of June 18 which set forth in a practical manner our actual and real aspirations concerning American solidarity.

I took part also in breaking off relations with the Imperial German Government and in ending our neutrality, which acts, supported by public opinion, culminated in our entrance into the war, thereby opening to the nation the doors of the league of honor.

All these things show my views on the foreign situation, and I will uphold them in the sense indicated.

I will continue, then, to maintain and extend our cordial relations with all nations, and shall always be an enthusiastic supporter of Pan Americanism, which does not contain, as you well know, an absurd spirit of hostility and reserve toward other continents, but, on the contrary, a strong desire for friendly organization among peoples destined to a life of common interests because of their geographic situation, their ethnic composition, their historic relations, and their democratic institutions. I will, furthermore, cultivate with special care our friendship with neighboring countries from which we have received such strong manifestations of affection and consideration, and will endeavor to strengthen the bonds which unite us to the allied nations whose destinies we joined in the great war, and out of whose immense sacrifices there will arise a new era of justice and peace.

After the remarks which Dr. Espalter, speaker of the assembly, addressed to President Brum, expressing to him the satisfaction with which the congress had heard the outline of the Government's program, and after offering to cooperate with him in the same, Dr. Viera, the retiring president, transferred his power to the new executive.

A few moments thereafter, and in the midst of general rejoicing by the people, who cheered the recently elected president on leaving the university, Dr. Brum entered the government palace and there received the congratulations of the special embassies and of the resident diplomatic corps.



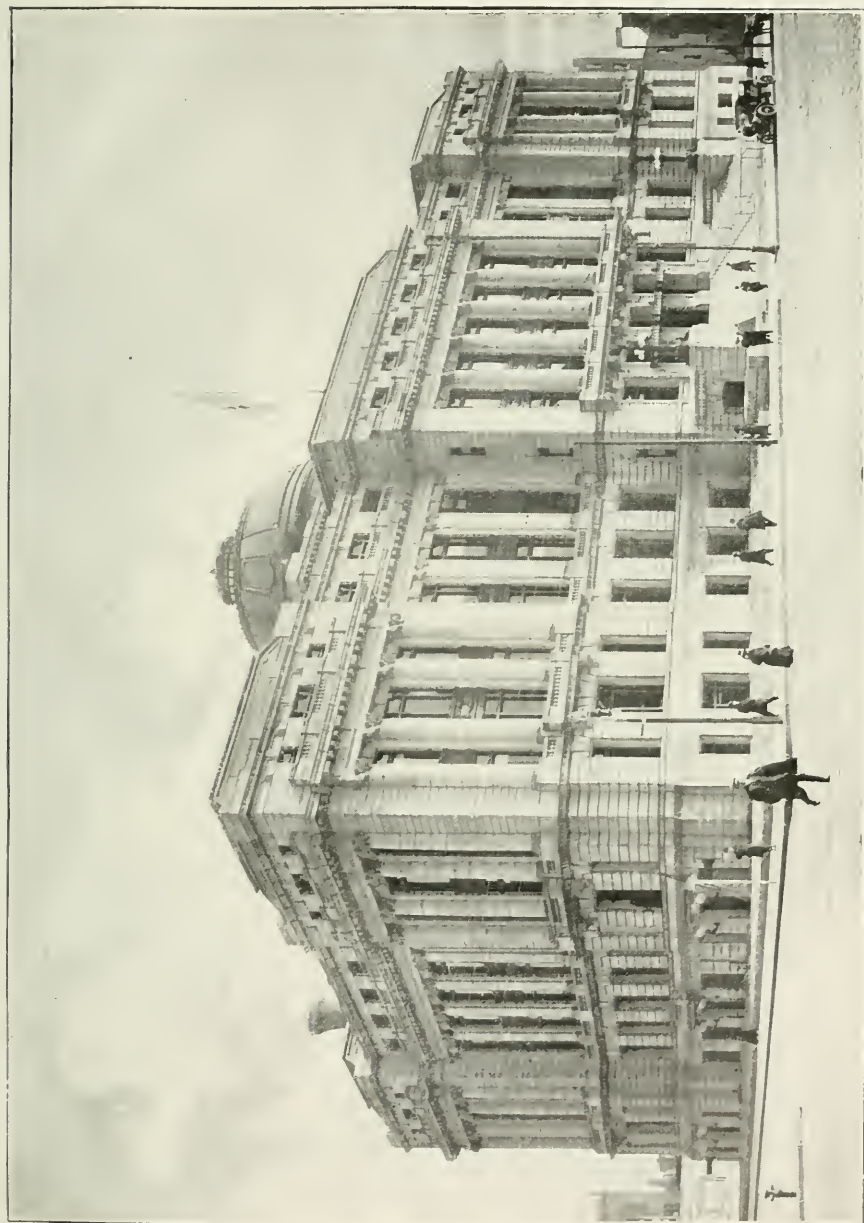
NEWARK--THE CITY OF INDUSTRY

SITUATED only 8 miles from New York City, Newark, the largest city of the State of New Jersey and ranking among the largest in the United States, is essentially an industrial city. Not excelling in any one particular branch of industry, unless it be the manufacture of jewelry and patent leather, Newark's industries in a variety of commodities are among the foremost in the country.

Newark was settled in 1666 by a party of Puritans who had emigrated from their native State of Connecticut because of disagreements between the church and government. They were able to buy from the Indians practically all of what is now Essex County, in which Newark is located, for "fifty double hands of powder, one hundred bars of lead, twenty axes, ten coats, ten guns, ten swords, four blankets, and three trooper's coats," together with a number of other things not even as valuable as those mentioned above. The town was governed largely after the Mosaic law and continued essentially Puritan for over 50 years. Partly because of its Puritanic origin and partly because of its independent manufacturing interests, Newark, in spite of its nearness to New York City, has kept a distinct character of its own. The city received a large part of its foreign population immediately after the revolution of 1848, when many Germans settled there. It was incorporated as a township in 1693 and was chartered as a city in 1836.

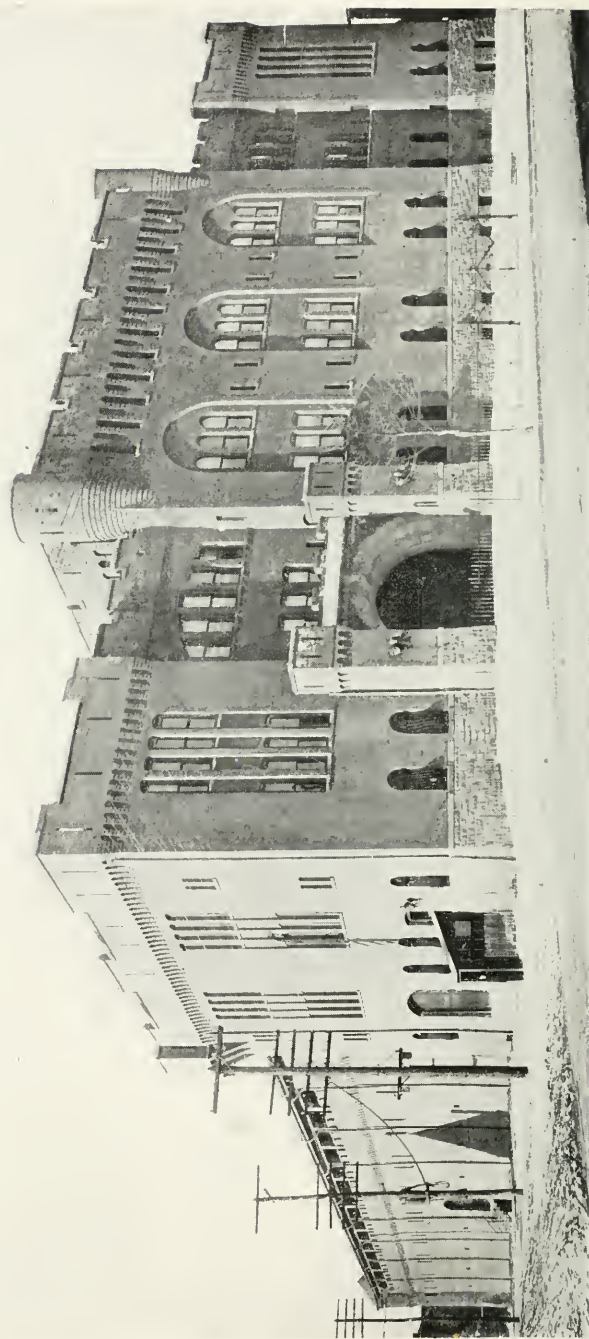
The city has grown with remarkable swiftness. In 1790 it could scarcely be recognized as a village with its population of 1,200. In 1825 it was a busy manufacturing center, with a population of over 8,000. From then on with constant steadiness the city grew. During the 10 years ended with 1910 the population increased 41.2 per cent, and according to the last census numbered 347,469, ranking fourteenth in size of the cities of the country.

As the population increased so did the industries of the city, but the industries were not confined to any one class. They have been so varied that Newark today has probably a greater number of diversified industries than any city of the United States. It has over 250 distinct lines of industry and over 2,000 manufacturing establishments. In the aggregate value of its manufactured products it ranks ahead of 30 States. The capital invested in the city's manu-



CITY HALL, NEWARK, NEW JERSEY.

The City Hall is an imposing granite and white marble structure, surmounted by a huge dome. It was erected at a cost of \$2,250,000. The basement is occupied by police headquarters, the poor and alms department, the superintendent of public works, and other city officials and departments.



FIRST REGIMENT ARMORY, NEWARK, NEW JERSEY.

This is a massive red brick structure, covering almost an entire city block. In this building military receptions, drills, fairs, and other attractions draw thousands of visitors.



WEEQUAHIC PARK LAKE, NEWARK, NEW JERSEY.

Weequahic Park contains over 300 acres and is the largest park in Newark. The lake furnishes boating, canoeing, and fishing in the summer, and in winter hundreds of skaters enjoy its icy surface.

facturing industries employing 10 or more hands amounts to \$154,-233,000, and in these particular fields of labor 59,995 operatives are engaged. In 1914 seven industries of the city had an annual output exceeding \$7,000,000 each in value. These industries were the tanning, currying, and finishing of leather; smelting and refining of copper; the manufacture of foundry and machine-shop products; malt liquors; jewelry; electrical machinery, apparatus, and supplies; and paints and varnishes. Other industries with products valued over \$4,000,000 each were the manufacture of chemicals; bread and other bakery products; slaughtering and meat packing; manufacture of corsets; printing and publishing; and the manufacture of copper, tin, and sheet-iron products.

The industries mentioned above are the chief ones of Newark, and a consideration of their diversification gives an idea of the character of the city. Excelling as it does in certain lines, a hundred or two other lines are by no means lacking in representation. Laborers and skilled operators in every line of manufacture can be found in this metropolis. Some cities have an overwhelming majority of laborers accustomed to working in a particular kind of industry, but Newark contains all kinds. And as the industries differ so do the nationalities, habits, tastes, and customs of the wage earners. Here the natives of every country in the world find a home and employment suitable to their taste. Newark is cosmopolitan more than any other city of its size in the United States. A good index of the many different classes of wage earners is the number of trade-unions. Secretaries of 80 distinct trade-unions have their headquarters at Newark. Through the aid of local building and loan associations many of the foreigners have succeeded in building their own homes as well as in accumulating savings accounts.

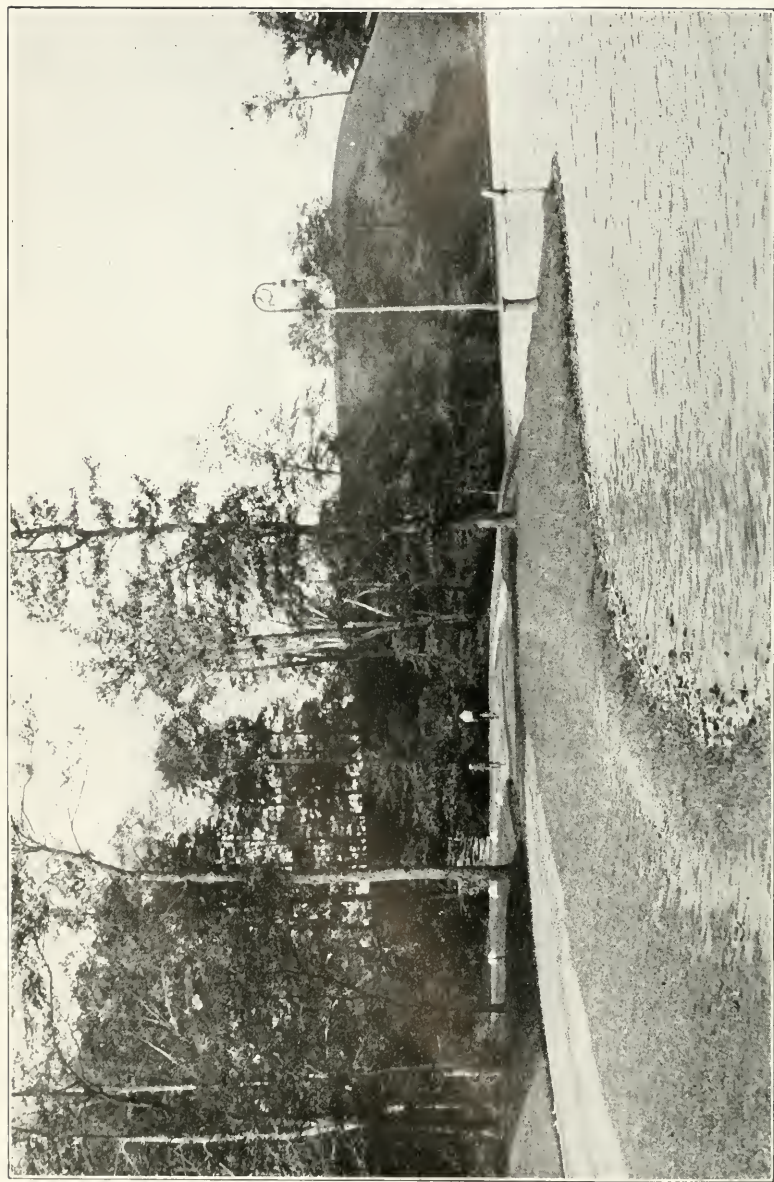
A recent school census shows that Newark is a veritable "city of many nationalities." Statistics show that in the public schools there were 17,329 American children of native ancestry, 9,166 Hebrews, 6,513 Germans, 5,498 Italians, 1,417 English, 827 Irish, 483 Scotch, 277 Poles, 257 Magyars, 226 Russians, 202 Swedes, 199 French, 171 Canadians, 135 Slovaks, and a fairly large representation of Chinese, Japanese, Javanese, Finns, Guavians, Syrians, Turks, Greeks, Egyptians, and a score of other nationalities, as well as 1,172 Negroes. With a varied population of this kind disturbances and breaches of the peace might be expected, but in fact the city is surprisingly free from petty crimes.

Newark, while far enough away from New York to be in no way identified with that city, is still near enough to make it easily accessible. Travel to and from and within the city is made quick and comfortable by six railroads, the Hudson and Manhattan tubes, which



NORTHERN ENTRANCE TO BRANCH BROOK PARK,
NEWARK, NEW JERSEY.

Branch Brook Park, of 280 acres, is situated in the geographical center of Newark. The park improvements cost \$1,412,443, and it contains 11 miles of walks.



AT THE END OF THE LAKE, LAKESIDE DRIVE, NEWARK, NEW JERSEY.

connect the city with the business and financial center of New York, and 23 trolley lines. Newark is daily served by 254 freight trains, and has a water frontage of $10\frac{1}{2}$ miles on Newark Bay and the Passaic River. Over 800 passenger trains daily give service to and through the city. Closely related to a city's transportation facilities, from the viewpoint of the manufacturer and merchant, are its possibilities in the way of providing gas and electricity for power or fuel to be used in the transformation of raw materials into finished products. Because of the good facilities offered by Newark along these lines many of the industries formerly operating with soft coal have changed to electricity, which, aside from the economic advantage resulting therefrom also diminishes the soft-coal nuisance and improves the hygienic condition of the city.

As the center of the leather industry, Newark has a world-wide reputation. In patent-leather making it leads the world, and is the largest leather manufacturing city in the United States and as such does a business with foreign countries amounting to several millions yearly. In 1914 Newark had 79 leather manufacturing establishments turning out products valued at over \$20,000,000. As a manufacturer of jewelry Newark stands at the head of the industry in the United States. In 1914 fully 167 establishments in Newark were engaged in the manufacture of jewelry. Resulting naturally from the fact that so many jewelry establishments are located in the city, it is one of the largest buyers in the world of diamonds, pearls, rubies, and a variety of other precious and semiprecious gems. Allied with the jewelry trade is the manufacture of numerous other articles, such as jewelers' tools, brushes, and optical goods. Compared to the entire United States the city in 1909 had approximately 7 per cent of the establishments devoted to the currying, tanning, and finishing of leather, and the value of the product was 6 per cent of the entire country. In the jewelry trade Newark had 10 per cent of the number of establishments and put out 16 per cent of the value of jewelry products. This record is that of a single city arrayed against the entire United States.

There was a time when the mention of an industrial and manufacturing city would call to mind pictures of grimy buildings, a smoke-filled atmosphere, and ill-kept streets, but in recent years we have come to believe that a really progressive city must keep its streets in perfect condition, and be equipped with public parks and playgrounds in order to maintain the efficiency of its industries. Newark has 25 parks ranging in size from plots covering a square or triangular block to green-shaded tracts covering many acres. Two of the parks are in the center of the business district, and the others are scattered throughout the city. Branch Brook Park, situated



BROOKSIDE DRIVE, SOUTH MOUNTAIN RESERVATION, NEWARK, NEW JERSEY.



THE POST OFFICE, NEWARK, NEW JERSEY.



HEMLOCK FALLS, SOUTH MOUNTAIN RESERVATION, NEWARK, NEW JERSEY.

near the geographical center of the city, has an area of 280 acres; and, evidently believing that such a park in the center of the city should be of more benefit to pedestrians than to vehicles, the Essex County Park Commission constructed the park with 11 miles of walks and only 4 of roads. The park improvements cost considerably over a million dollars. Tennis courts, cricket grounds, and ball fields are to be found in this park, as well as gardens, lakes, and beautiful lawns. Weequahic Park, another of the county garden spots, contains a large lake, where boating and canoeing may be enjoyed in the summer and skating provided for the lovers of winter sports. East Side Park, located in a thickly settled section of the city; Riverbank Park; and several others are scattered in and around the city. Incidental to the parks are a number of statues of men not only prominent in Newark and New Jersey affairs, but known throughout the country and the world. Playgrounds, recreation centers, and free shower baths are other benefits given the people.

Newark's educational system enjoys a high reputation. It is interesting to note that the College of New Jersey, now Princeton University, was situated here from 1747 to 1756, under the presidency of the Rev. Aaron Burr. Boston alone of the 20 largest cities of the country equals Newark in having the largest percentage ($16\frac{2}{3}$) of its population enrolled in the public schools. As parts of its public school system the city maintains several summer or vacation schools, a normal and training school for the education of teachers, a school of drawing, and a technical school. Variety and diversity of manufactures, proximity to the chief marts of commerce and trade, and other important local conditions have enabled the city to attain the material means to maintain schools, both public and private, of a high standard. The Newark Academy, founded in 1792, is the leading private school, and there are a number of Roman Catholic academies.

The public library contains nearly 200,000 volumes and the library of the New Jersey Historical Society about 26,000 books, 27,000 pamphlets, and many manuscripts. The Prudential Life Insurance Co., one of the largest in the world, has its headquarters at Newark and maintains a law library of over 20,000 volumes, and the Essex County Lawyers' Club has one of 5,000 volumes or more. The total number of books loaned to card holders amounts to over 1,000,000 annually.

With such a varied population and diversification of industries it is safe to say that the city of Newark will not only keep its place of rank among the cities of the country, but will gradually forge ahead. Its name is known all over the world wherever United States manufactured products are used or sold, and in this way the city is fast assuming international importance.

MINERAL MONOPOLIES OF THE AMERICAS¹ ∴ ∴ ∴

THE distribution of the mineral products of the earth, as shown on mineral maps of the world, presents many striking features, many of which are still without scientific explanation. In one region certain kinds of rocks, particular structures, or peculiar characteristics of one sort or another, may be used as indicators of valuable deposits of minerals, but another region with similar features may be entirely barren. Although our knowledge of the economic mineral products has advanced to a point where an experienced mining engineer or geologist can distinguish between favorable and unfavorable localities, the remark is often heard that ore should be found in such and such a place despite the fact that repeated efforts to discover it have met with discouragement. The failure of the particular mineral after the stage being all prepared for it, as it were, in many cases baffles all our scientific research and forces us to admit that the explanation of the seeming capricious acts of Nature are as yet beyond our ken. Perhaps the one determining factor has not yet been recognized or possibly the requisite combination of causes may be at fault. We only know that with or without recognized cause some sections seem to have been especially favored in the distribution of the valuable economic mineral products whereas others are markedly deficient.

Fortunately the mineral products on which we are at present most dependent have a wide distribution and few countries of the globe are entirely lacking in them. Coal and iron ore, the two most important mineral products, are the best examples of such mineral substances. We may claim, however, that these are our most important mineral products simply because of their abundance and wide distribution, and that other less common materials would be equally useful could they but be procured in sufficient quantities at equal costs. Platinum, for example, might well replace many of the more common metals, even iron, in hundreds of uses if it were not for its rarity and consequent high cost.

The fact remains that certain regions are rich in minerals that the inhabitants of other sections desire and for which they are willing to pay reasonable prices. The country that is rich in some product that is highly necessary for the development of important industries in other countries can always secure favorable terms in the barter

¹ By Benjamin L. Miller.



SCENES OF THE MINASRAGRA VANADIUM REGION.

Upper picture: The writer and his companions on the way to the Minasragra vanadium mine. Note the rope bridle of the Indian boy. Lower picture: Principal open-cut workings of the Minasragra vanadium mine. This mine produces more vanadium than any other in the world.

and exchange that constitutes international commerce. In some instances the favored country may not be the only one possessing deposits of the desired product, in which case severe competition may result. It may be, however, that active competition may so stimulate the industry that the accruing benefits may be far greater than without such an incentive.

It is rare that a country possesses an absolute monopoly of any mineral product, although there are a few cases of that kind. There are many more in which a restricted area or a certain country may possess so large a proportion of the world's known occurrences of a certain product that it has practically all the effects of a complete monopoly. Germany did not contain the only potash; Russia was not the only country furnishing platinum; South Africa is not the only diamond region; and yet these countries have so largely dominated in the production and sale of these particular commodities that little additional value could result in absolute monopoly. Many other instances come to mind from other parts of the world, but it is scarcely necessary to enumerate more.

A monopoly nearly enough complete to control the world's markets is a desideratum which is possessed by not a few of the independent countries of the world, and in this respect the Republics of the Western Hemisphere are especially fortunate. Not until the war disturbed the international exchange of the raw mineral products, largely because of the shortage of ships, was there much necessity for the consideration of the advantages of national supplies of all necessary minerals. An illustration of this kind is furnished by manganese. The supplies of manganese ore from Russia and India, required by the steel manufacturers of the United States, were at once cut off on the outbreak of the war in Europe, thus necessitating the importation of Brazilian ores at considerably greater expense. Soon after the United States entered the war the urgent need of vessels to transport men and supplies to Europe caused the shortage of shipping to become so serious that it became necessary to still further curtail imports, and domestic supplies were sought even though the cost was much greater. Fortunately, the United States contained undeveloped manganese deposits, and in a short time, had the war continued, the necessity for the importation of foreign manganese ores would have entirely disappeared.

Similar stories might be told concerning the development within the United States of pyrite mines to remove the necessity of sending ships to Spain for the necessary supply; the opening of numerous chromite mines in California and Oregon to supply domestic needs, previously satisfied by the importation of ores from Turkey, Russia, New Caledonia, and Rhodesia; and the search for tungsten deposits to furnish the tungsten needed for the manufacture of tungsten steel



THE MINING REGIONS OF PERU.

Upper picture: Lake Punrum, one of the most beautiful lakes of the Peruvian Andes, with the great limestone walls in the background. Lower picture: Typical view in the Minasragra mine region. Llamas and alpacas may be seen grazing on the sparse vegetation that grows at the elevation of 14,500 to 16,500 feet above sea level.

and to replace the supplies formerly obtained from Burma. Attempts were made to develop the graphite industry by increasing the domestic production, thus removing the necessity of importing Ceylon graphite, but in this respect the undertaking was only partially successful, as the graphite manufacturers insisted that the Ceylon product was necessary for graphite crucibles on account of its peculiar physical properties.

The other countries of the world were handicapped in a like manner, in many cases much more seriously, by their lack of essential raw mineral products. Frequent stories have been told of the straits to which the central powers of Europe were reduced, due to their deficiency in copper and nickel, as well as several minor products.

National independence in the raw mineral products in time of war is fully appreciated if not in time of peace. It is certain that if the nations are ever again threatened with a world war, one of the ways in which preparation will be made will be by the accumulation in advance of enormous stocks of all necessary raw mineral products not produced in each country in sufficient quantities to meet the domestic needs. So great have been the difficulties of international exchange during the war, and, in some instances, so bitter is the feeling even yet between the late belligerents, that in many quarters there are urgent demands that nationalism take the place of internationalism and that the nations should so develop their latent resources that they become independent of all other countries. Such aspirations, as far as it applies to national independence in the minerals, can never be fully realized by most countries owing to the limited distribution of certain necessary ores, and also it is questionable whether the citizens of any country would be willing to continue indefinitely to pay higher prices for domestic products than for similar materials obtainable as imports from other countries at lower prices. Reasonable tariff barriers for the promotion of infant industries will no doubt continue or even increase, according to the present outlook, as indicated by the writings of prominent men in various countries; but such tariffs should not be excessive or continue beyond the period necessary to determine whether the local or domestic ventures can become successful on their own merits. On this subject many different points of view are being expressed and one can not foretell the outcome.

If not at once, at least within a few years, however, it seems probable that we will again be back on much the same basis as in prewar times, with each country freely exchanging its products with the other nations, the deficiencies of one supplied by the surplus of others. In the full development of such a plan only those domestic supplies will be utilized that can be obtained more cheaply than similar substances of other countries, and free international com-



VIEWS OF THE ROCK FOREST NEAR MINASRAGRA, PERU.

The route to the vanadium mines of Minasragra, Peru, leads through the famous Rock Forest. The wind and rain have carved the rocks into various fantastic shapes, and the spot has a strong attraction for the traveler.

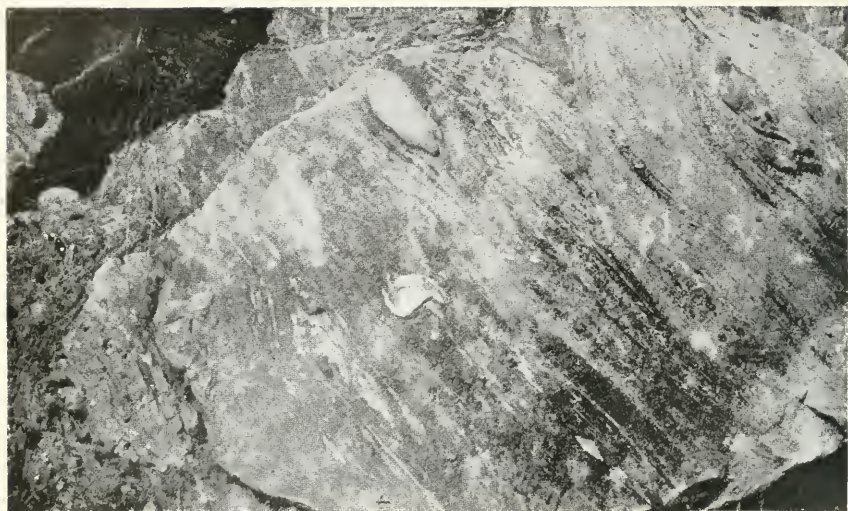
petition will result except for the imposition of moderate tariffs which are necessary for revenue, and perhaps at the same time giving protection to industries requiring a minimum amount of assistance. Under these conditions the possession of monopolies or practical monopolies of any of the necessary raw materials becomes a distinct national asset unless the league of nations should at some time formulate rules for the international control of minerals as has been suggested.¹

The value of a mineral monopoly of world-wide use is twofold. It initiates international trade with various other countries and constitutes a source of national revenue through the levying of export taxes. It has long been regarded as legitimate and desirable that foreign buyers of a monopoly should contribute to the support of the government of a nation so favored, inasmuch as revenues from some source are essential. Especially is this true as applied to raw mineral products that are exported as the country exhausts its resources and becomes poorer thereby. The danger in the levying of export taxes is the possibility of stifling the industry through excessive rates.

In general that country is most favored in the variety of its mineral products that has had the most varied or complex geologic history. The geologic conditions that are necessary for the formation of one type of mineral product are apt to be entirely unsuitable for the accumulation of other materials. Certain economic products such as coal, petroleum, salt, etc., are confined to regions of sedimentary rocks; most of the iron and manganese ores of prominence, together with certain other metallic products, are commonly associated with ancient rocks of igneous or sedimentary origin but which have subsequently undergone metamorphism, whereas the bulk of the gold, silver, copper, tin, and mercury ores are intimately related to later igneous rocks. We also find that certain kinds of igneous rocks are more frequently ore bearing and certain structures are also very important. The chances are therefore much in favor of varied mineralization in a section where varied geological activities have taken place.

Both of the American continents possess the variety of geologic formations that might be expected to result in the formation of many kinds of mineral deposits, and taking each continent as a whole we find few of the important minerals lacking. In general, in each continent ancient rocks which once formed the cores of lofty mountain chains are represented in the eastern portions, sedimentary strata which have undergone little change are found in the interior, and recently disturbed sedimentary strata intruded by

¹ C. K. Leith: *International Control of Minerals*. Mineral Resources of the United States, 1917, Pt. I, pp. 7a-16a, U. S. Geol. Survey, Washington, 1918.



GRENVILLE CRYSTALLINE LIMESTONE, NEAR WANUP, ONTARIO, CANADA.



NICKEL BASIN, AZILDA, ONTARIO, CANADA.

View of the interior of the nickel basin. The nickel-bearing rock formation of the Sudbury district has the shape of a canoe with the edges outcropping and the central portion occupied by other kinds of rocks. The canoe-shaped basin is 36 miles long and 16 miles wide. The ore bodies are found at intervals all about the rim, and presumably there are many equally rich ones in the central portion deeply covered by the rock strata.

comparatively young igneous rocks are abundantly represented in the western mountain systems. The newer mountains of the Pacific Ocean side contain the bulk of the mineral wealth of the continents, the interior sections have considerable coal, and the eastern lower mountains or hills are rich in the baser metals and the gem minerals.

With such a distribution Canada and the United States would be expected to have the most varied mineral resources in comparison with the other American countries, inasmuch as they extend from the Atlantic to the Pacific. The other countries whose borders are washed by the waters of the two oceans, such as Mexico, Guatemala, Nicaragua, Costa Rica, and Panama, lack the ancient rocks so prominently developed in eastern Canada, the United States, and Brazil. No South American country, unless we except Colombia, borders both oceans, and none of them contains the three belts described above. This means that the United States is the only one of the American Republics that should be expected to ever become reasonably independent, so far as its mineral requirements are concerned; and yet in spite of its varied mineral wealth, it lacks several products. Fortunately, most of these can be furnished by some of the other American Republics.

Brazil, notwithstanding its great size, does not contain any representatives of the younger mountains and recent igneous rocks, and consequently lacks in many of the important mineral deposits. Peru, for example, with its great wealth of copper, mercury, sulphur, borax, lead, zinc, etc., might well supplement Brazil with its iron ore, manganese, gems, etc. Both of them contain gold and silver, although these precious metals are more widely distributed in paying quantities in the mountains of the Pacific slope than in the eastern ranges of the continent. Together Brazil and Peru, extending from the Atlantic to the Pacific, include the same wide range of geologic conditions possessed by the United States with a consequent wide variety of mineral deposits.

The importance of Brazil in supplementing the deficiencies of the Pacific coast countries in regard to mineral resources has not yet been fully realized. This is on account of the limited consumption of the raw products within the South American countries. With the exception of gold, of which probably the bulk is retained within the countries of origin, by far the larger proportion of the mineral output goes to Europe or North America, where the manufacturing industries have become much more highly developed. This will not always be the case, however, for the future holds promise for a much greater population in every one of the southern Republics; and with this increase will come improved transportation facilities, both of which are necessary forerunners of an extensive manufacturing industry. When that time comes railroads will cross the heart of the continent,



"THE KING."

A remarkable rock formation in the Rock Forest near Minasragra, Peru.

permitting free and ready exchange of the mineral products of the eastern and the western countries of South America. Not until then will the benefits afforded by one country being able to supply the deficiencies of its neighbor of the other ocean slope be fully appreciated.

Leith says that "the annual world production of minerals approximates 1,700,000,000 tons, over 90 per cent of which consists of coal and iron. Of this amount about two-thirds is used within the countries where the minerals are produced and one-third is shipped to other countries. The mineral production of the United States amounts to about one-third of the total."

As the United States uses far more mineral products in its manufactures than any other of the American Republics it is important to know what its deficiencies are. Leith names these as follows: Tin, nickel, platinum and metals of the platinum group—antimony, vanadium, zirconium, mica, monazite, graphite, asbestos, ball clay and kaolin, chalk, cobalt, Naxos emery, and grinding pebbles, with nitrates, potash, manganese, chromite, and magnesite that can be produced within the country but only at higher prices than they could be obtained from foreign sources. A casual glance at the list shows that other sections of the American continents can readily supply most of these deficiencies. Canada possesses ample supplies of nickel, asbestos, and cobalt; Brazil is well supplied with manganese, zirconium, and monazite, and probably mica; Bolivia is rich in tin and antimony; Colombia yields platinum; Peru supplies the world with vanadium, as does Chile with nitrates; and the other materials in the list, although now obtained largely from the Old World, may eventually be found in sufficient quantities in these newer countries. All of them are already produced in limited amounts at the present time, but in the known occurrences the question of quality, quantity, or excessive costs have forced the United States to seek European or Asiatic supplies. Indeed some of the materials in the list that might be obtained from the Western Hemisphere have actually been imported from European sources, due to better transportation facilities or superior quality, although these conditions which now favor the European producer may not necessarily always remain the same.

If the resources and needs of any of the other American Republics were examined in a similar manner it would be found that the obstacles to complete mineral independence would be much the same, and likewise that the deficiencies could be supplied in almost every case by the sister republics. With the future of the world still uncertain and the bonds of mutual sympathy and helpfulness becoming continually stronger between the nations of the American continents it is reassuring to realize the possibility of complete independence of



THE CREIGHTON MINE, SUDBURY REGION, ONTARIO, CANADA.

The open-cut workings of the Creighton mine, the world's premier nickel mine. The entire excavation has been made in ore.

Pan America if the exigencies of the future should ever require such combination of interest.

Let us now consider the mineral products of the American continents in which practical monopolies or market control exist and the countries which possess them. The list seems to be as follows:

Products possessed by American countries as absolute or practically complete monopolies.

Metallic:

Vanadium.....	Peru.
Nickel.....	Canada.

Nonmetallic:

Nitrates.....	Chile.
Iodine.....	Chile.
Borax.....	Chile, Peru, United States, Argentina, Bolivia.
Black diamonds.....	Brazil.
Monazite.....	Brazil.
Zirconium minerals.....	Brazil.

Products possessed by the American countries in quantities sufficient to dominate and control the world's markets.

Metallic:

Radium ores.....	United States.
Copper.....	United States, Chile, Peru.
Bismuth.....	Peru, Bolivia.

Nonmetallic:

Sulphur.....	United States, Chile.
Petroleum.....	United States, Mexico.

Gems—

Emerald.....	Colombia.
Topaz.....	Brazil.
Amethyst.....	Brazil.
Graphite for pencils.....	Mexico.

In the above table the two metallic products listed among the nearly complete monopolies are vanadium and nickel, both of which attain their greatest use in the manufacture of high-grade steel adapted for special purposes. Along these lines there have been wonderful improvements during recent years, since it has been recognized that the addition of small amounts of other metals would impart desirable qualities to the steel. The number of these substances now being employed in the manufacture of ferroalloys is already great and is continually increasing.

One of the most fascinating stories connected with mining is the discovery and development of the now famous vanadium deposits of Minasragra, Peru. The deposits are located in the high Andes, Junin Province, at an elevation of 16,500 feet above sea level. They are about 25 miles from the nearest railroad, without even a wagon road leading to the mines, and yet in spite of these obstacles they control the world's vanadium markets and furnish 80 per cent, or possibly more, of vanadium used. Furthermore, this position was



THE CREAN HILL MINE, SUDBURY REGION, ONTARIO, CANADA.

The Crean Hill mine is one of the principal nickel mines of this section of Ontario, Canada. Copper also is taken in abundance from this mine.

attained almost immediately upon the discovery of the deposit, and the supply of ore still available seems to indicate that its premier position will long be retained.

When it was found that the addition of vanadium to steel greatly increased its strength, and especially where resistance to shock was demanded, search was made for this desirable material in various parts of the world, and although found in limited amounts in several places, the rugged Andes finally furnished the choice deposit. Fortunate indeed it is that the Minasragra deposit was discovered before the outbreak of the war, for vanadium steel has been extensively employed during its continuation in the manufacture of the steel of aeroplanes, machine guns, heavy artillery, armor plate, etc., enabling the manufacturer to produce equal strength with less weight than would otherwise have been possible. In times of peace vanadium steel has probably found its greatest application in the manufacture of automobile parts and in connection with tungsten in high-speed tools.

For many years a mass of black asphaltic substance had been observed to the southwest of Cerro de Pasco, and because of its resemblance to coal was mistaken for a fuel. Several times the properties were denounced as coal lands, but as the material would not burn readily and contained much sulphur the claims were abandoned. In 1905 some of the material was brought to Señor Antenor Rizo Patron, one of the ablest mining men of the Peruvian Andes, who made an analysis, which to his surprise showed a high percentage of vanadium. He denounced the claims at once for vanadium. The control of the property shortly passed into the possession of the American Vanadium Co., by whom it has been operated ever since.

The trip made by the writer to Minasragra will ever be remembered with delight. Leaving the smelter of the Cerro de Pasco Mining Co. on horseback on a crisp morning, a short ride brought us to the Hauraucaca smelter of E. E. Fernandini, managed by Señor Patron, where we stopped for a short time and then continued over the gently rolling pampa for 8 to 10 miles. The temptation was to urge the horses into a pace such as one might take in a plains region in most sections of the world. However, this comparatively flat pampa has an elevation of about 14,000 feet above sea level, which necessitates slow riding. Horses as well as men quickly feel the effects of exercise in the rare atmosphere no matter how long they may have lived in the region. Sparse vegetation covers the pampa except along the water-courses and occasional marshes, where there is sufficient vegetation for good grazing.

The route we took led near the famous Rock Forest, where wind and rain have carved the rocks into various fantastic shapes suggestive of ruined castles, stumps of trees, gnomes, hobgoblins, and grotesque

animals of various kinds. In few other places, if any, can one find more interesting rock forms than are exhibited in this place, and one can readily appreciate the attraction it holds for the residents of the Cerro de Pasco region.

The pampa gives way as one goes westward to a more rugged country, and finally Lake Punrum comes in sight. This is one of the most beautiful of the lakes of the high Andes and most attractive with the great wall of white limestone along the western side. Various wading birds frequent this body of water and add to its attractive features. Our course now veered somewhat to a place where the limestone wall had been cleft forming a narrow gorge, and through it we entered the more rugged country of the vanadium district. The trail is steep for the last few miles, so that it was well past the noon hour before we arrived at the mine, it having required about eight hours to make the trip of about 25 miles. In general, the farther one travels from the centers of population the greater hospitality one encounters, and Minasragra is no exception, yet at best life is strenuous and lived with few of the ordinary comforts at such elevations as this and remote from railroads. As soon as the sun disappears it is uncomfortably cold, and snow banks and glaciers are always in view in the near-by mountains. Since the fuel consists of small shrubs or else coal brought in on the backs of llamas from a considerable distance, little can be used for heating purposes, and one is apt to recall the comforts of steam heat and hot baths, and longing for these unobtainable luxuries colors one's dreams.

About this interesting deposit now worked in part by open-cut and in part by underground mining, a small settlement has grown up. The rich vanadium ore is mined, sent to the roaster which has been erected near-by, and thence in sacks transported on the backs of llamas, the most useful animals in the Andes, to the railroad, whence it goes to the steel centers of the world.

The Minasragra deposits have competition from various sections of Europe and North America, and during the war considerable amounts were produced in the United States and some of the European countries. This was, however, due mainly to the difficulties encountered in shipping the ore from Peru. With the return to peace times it seems probable that Peru will be called upon to furnish an even larger percentage of the world's demands than ever before, which it can well do for a great many years from the already-developed deposits.

The history of the world's greatest nickel region presents many features similar to that of the Minasragra vanadium district. In 1856 a land surveyor of Ontario, Canada, found a magnetic disturbance of the compass needle while surveying in what is now the Sudbury nickel region and suggested that an examination should be made of

the locality. This was done and led to the discovery of a great mass of iron sulphide (pyrrhotite) containing considerable copper and nickel. The deposit was remote from railroads, there was little demand for nickel, and the copper was present in such small quantities as to be valueless. Consequently little attention was given to the discovery.

In 1883 the Canadian Pacific Railway, the first railroad built to connect eastern and western portions of Canada, reached the Sudbury region, and the nickel-copper-pyrrhotite deposits were rediscovered, although the presence of nickel was overlooked until an investigation was made to discover the cause of the difficulties experienced in smelting the copper ore. Even then it was several years before the nickel was considered especially desirable in comparison with the copper. Gradually, however, the importance of the nickel began to be appreciated, and the Canadian nickel industry was developed to the foremost position which it now holds.

Norway led the countries of the world in its nickel production from the forties until the discovery of the rich deposits of New Caledonia in 1874. Since then the Norwegian nickel industry has declined, although stimulated to renewed activity during the war. New Caledonia controlled the world's nickel market until the Canadian industry became well established. Since 1905 the New Caledonia production has decreased about 30 per cent whereas the Canadian production has increased nearly 400 per cent. In 1915 there were 34,039 tons of refined nickel produced from Canadian ores and only 2,569 tons from New Caledonia ores. The ore reserves of Caledonia are estimated to amount to only about four years' production of the Canadian mines, consequently it can readily be seen that Canadian control of nickel practically amounts to a complete monopoly, which it bids fair to maintain for many years with its millions of tons of ore reserves.

During the war about 75 per cent of the nickel produced was used in the manufacture of nickel steel which, under normal conditions, accounts for about 60 per cent of the output. The balance is used as pure nickel or alloyed with various other metals for a great variety of purposes. Nickel steel is especially desirable on account of its great tensile strength and its resistance to corrosion, and is more widely used every year.

The nickel-bearing rock formation of the Sudbury district has the shape of a canoe with the edges outcropping and the central portion occupied by other kinds of rocks. The canoe-shaped basin is 36 miles long and 16 miles wide. The ore bodies are found at intervals all about the rim, and presumably there are many equally rich ones in the central portion deeply covered by the rock strata.

There are several extensive ore bodies known in the Sudbury district, the greatest of which is the famous Creighton mine deposit. It consists of a great body of practically pure ore which has been explored in depth to a distance of 2,000 feet, measured along its dip, has a length of 1,000 feet, and a width at the surface of 180 feet. The hand-picked ore contains 4.44 per cent of nickel and 1.56 per cent of copper.

Until recent years nearly all the nickel of Canada was refined within the United States, but the situation in this respect is changing, so that Canada is gradually extending its control over all phases of the nickel industry of the world.

[To be continued.]

THE NATIONAL LIBRARY OF CHILE¹

IN the midst of the troublous days that ushered in the Republic of Chile the founders of the nation did not lose sight of the finer aspects of life even before political stability was attained. In 1813 the Government established the national institute and the first public library of the country with a view to the diffusion of culture among all classes of her citizens.

The foundation of the library, which was installed in the Factoría General del Estanco under the direction of Don Agustín de Olavarrieta, was the old Jesuit collection, consisting of 5,000 volumes, which since the expulsion of the order has been conserved in the University of San Felipe. As was to be supposed, the collection was of too limited a character and of too old a date to meet the requirements of the time and satisfy the eager minds of the period of transition to a republic as they groped toward scientific satisfaction of their questionings. Hence the Government inserted in "El Monitor Araucano" the following request for the contribution from private citizens of books which might be valuable in a public library:

"Citizens of Chile: A foreigner, upon entering a country, formulates his estimate of its culture by the libraries he finds and similar institutions; and the first step which people take in the quest for wisdom is the establishment of great libraries. For this reason the government is sparing no expense or effort in creating a national library, and on the 10th you heard the list of the collection it has

¹ English version of an article by Alcides Fuenzalida in "La Información" of Santiago, Chile.



THE NATIONAL LIBRARY, SANTIAGO DE CHILE.

The Santiago library was founded in 1813, at the time of the proclamation of Chilean independence, and is at present housed in the building shown in the illustration while awaiting the completion of a new building in the process of construction. The library was established with 5,000 volumes formerly owned by the Jesuits, and by 1916 contained 300,000 volumes.

prepared for you. But this library is not yet worthy of the Chilean nation. The world must learn to know the interest which every citizen has in the welfare of the others and that Chile is one family."

Realization of the ambitions of the government was delayed, however, by the episodes of October, 1814, at which time the institution was closed temporarily, to be reopened in 1818, the year in which independence was made definitely possible, under the direction of Don Manuel de Salas, the keenest mind of his time. In 1823 he was superseded by Camilo Henríquez, the indefatigable leader of the revolution, who resigned during the same year, to be supplanted by Don Manuel Gandarillas.

At first the library did not become a potent factor in the intellectual life of the country, owing chiefly to the difficulty in obtaining new books, not only because of the lack of bookstores, but also because of the condition of the national treasury during the war. The lack of perfect accord in governmental plans was evidenced in a decree by which the library was converted into a reading room alone during the time of Señor Gandarillas. Don Francisco de Borja García Huidobro, appointed in 1825, was the librarian for 25 years. He added many volumes, particularly works on law, the sciences, ancient classics, and French literature.

In 1834 the law of literary copyright was passed, from which year all books published in the country were collected. At the death of Don Mariano Egaña his valuable private library, composed chiefly of European works, became the property of the library. The next director, Don Vicente Arlegui, issued the first catalogue, divided into two parts—the general list and Señor Egaña's collection. Later, Director Ramón Briceño, a man especially fitted for research, published the *Bibliographic Statistics of Chilean Literature*, a catalogue which contains a list of all the press production of Chile from 1812 to 1860, later revised by its author complete to the year 1876. Señor Briceño also established a system of exchange with the other American Republics.

Don Luis Montt, a distinguished literateur of the time, who succeeded him as director, created new sections, modified old, and placed the institution upon a scientific basis in accordance with the demands of the day. Señor Montt died at the close of 1909 and was succeeded by Don Carlos Silva Cruz.

The statistics given below demonstrate the success with which he has guided the affairs of the library, with the help of efficient assistants, such as Don Ramón A. Laval, the assistant director.

The various functions of the institution are accomplished through the following sections: Administration; general supplies; Chilean section, divided into the book and pamphlet section and the newspapers and periodicals section; home reading; manuscripts; reading room; exchanges and acquisitions; information; bibliographical section; cen-

tral exchange of publications and depository and sale of official publications. The duties of every one of these sections, as will be seen, are well defined, and some do a prodigious amount of work yearly. This is particularly true of the home-reading and bibliographic sections.

Toward the close of 1916 the library contained 211,911 bound volumes, which shows an interesting increase compared with previous years: 1911, 164,460; 1912, 176,894; 1913, 184,099; 1914, 194,103; 1915, 200,603; 1916, 211,911. To this number, 90,000 unbound volumes, acquired as duplicates or exchanges, should be added as well as a large number of books and pamphlets which it was impossible to have bound; the total number of books, pamphlets, files, and periodicals possessed by the library toward the close of 1916 was over 300,000.

Total number of readers during the past four years.

	1913	1914	1915	1916
Reading room.....	50,547	85,479	104,965	115,576
Home reading.....	9,000	10,398	12,386	12,283
Manuscript section.....	892	745	743	965
	60,439	96,622	118,094	128,824

Total number of books read.

	1913	1914	1915	1916
Reading room.....	60,267	112,397	159,858	181,581
Home reading.....	12,959	14,317	15,228	25,192
Manuscript section.....	3,626	2,490	2,455	1,660
	76,852	129,204	177,541	208,433

In other words, the number of readers in 1914 increased 59 per cent over 1913, 95 per cent in 1915, and 113 per cent in 1916. The increase in the number of books read is 68 per cent in 1914, 131 in 1915, and 171 per cent in 1916. During 1917, 110,315 men and 2,289 women made use of the reading room in 341 legal days (an average daily attendance of 330), and 172,150 works were consulted. The languages used in reading room books are shown by the following tables:

	1917	1916	1915
Spanish.....	159,321	164,504	145,014
French.....	6,732	11,819	9,920
English.....	4,751	3,149	2,301
Italian.....	685	1,439	1,765
German.....	564	516	326
Russian.....	89	153	532
Dead languages.....	8	1	.....
	172,150	181,581	159,858

The 12,292 books acquired in the past two years are for the most part Chilean, Argentine, Ecuadorean, Mexican, Brazilian, North

American, Italian, and English works, of which the percentage of the two latter countries predominates, whereas the other countries show a slight diminution.

The exchange and interchange of publications is shown from the fact that in 1915 not less than 350 packages of books and in 1916 fully 400 were received from foreign countries, as indicated below:

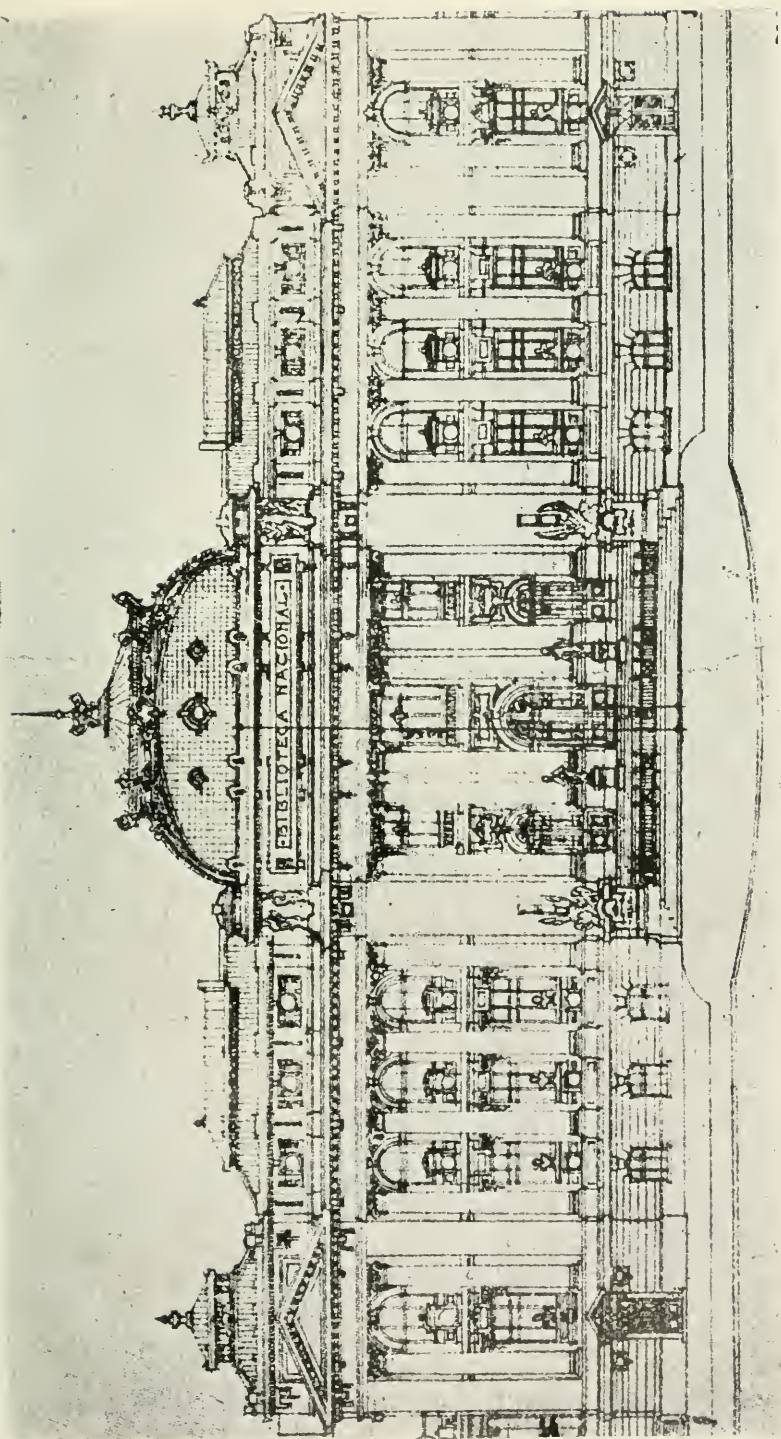
	1914	1915	1916
Publications received for the library from foreign parts.....	719	1,432	1,987
Publications sent to foreign countries.....	733	864	3,105
Publications sent to branches of the library.....			1,325

The legal depository of Chilean publications and the literary copyright registry, established by the laws of 1872 and 1834, respectively, have been improved as indicated:

	Legal depository.		Literary copyright registration.
	Books and pamphlets.	Magazines.	
1912.....	1,147	496	202
1913.....	1,291	507	142
1914.....	1,228	549	175
1915.....	1,405	507	269
1916.....	1,602	347	267

The bibliographical section since its creation in 1910 has had the task of cataloguing the library in conformity with the decimal system of classification adopted by the International Congress held in Brussels in 1895. In this period it has catalogued 61,387 works of 51,389 volumes, in which work the typing of approximately 400,000 cards was involved. This exacting method, used now in the principal libraries of the world, and the scientific advantages of which are beginning to be realized by the Chilean public, must be continued until the entire contents of the library have been classified, and will be accomplished under the competent guidance of the present chief of the section, a specialist without peer in the country.

One of the most valuable sections of the library is that of manuscripts, of which, by December 31, 1916, there were 10,334 bound volumes and 2,413 unbound; that is, a total of 12,747 volumes. This section, in charge of a man whose investigations have attracted attention both within and outside of the country, has had some of the contents copied and has made several reports concerning the historic value of certain documents and the finding of data in parochial and notarial archives, etc. By this procedure the desirability of collecting all the records of the country in one centralized library



FAÇADE OF THE NEW LIBRARY OF SANTIAGO.

The new building now under construction occupies the site formerly occupied by the Monastery of Claras, which was purchased at 3,300,000 Chilean pesos. The first stone of the new building was laid in August, 1913, and it is expected to be finished by the middle of 1920.

has been demonstrated. This will be realized when the section is installed in the new building.

The home reading section, which, as its name indicates, lends books to be perused outside of the library, upon the payment of a sum in proportion to the value of the book lent, attends also to the branches established by the present directorate in 1913. The creation of this branch service has been of great value to the working class which lives at a distance from the center of the city and whose duties make it impossible for them to borrow from the central library. The service was created in 1913 with 5 branches, now increased to 12; with 10 agencies scattered in various districts of the city, the majority being in charge of principals or teachers of primary schools. In these branches there are reading rooms, but the chief object is to encourage home reading. In fact, the agents attend to only the latter.

It remains to be stated that for the past five years the section has extended its activities outside of Santiago, providing books which have been requested in the provinces after the payment of the deposit. In this way persons studiously inclined, although residing in towns where libraries do not exist, may keep in touch with the progress of the scientific and literary world, and at a nominal expenditure keep pace with modern intellectual life.

Other sections, created in answer to the constantly increasing demands of the complex life of to-day, are performing equally essential work. One of these, known as the bibliographic consulting section, was created in 1912, and has responded to queries in the following number in the five years intervening: 1912, 740; 1913, 1,045; 1914, 1,210; 1915, 1,307; and 1916, 1,480. The section, directed by one of the ablest men on the staff, publishes the Chilean and Foreign Bibliographical Review, a work much consulted by all who wish to keep well informed. The General Bibliography of Chile has been published also since 1914, which is likewise of great value in reference work, as it contains lists in chronological, alphabetical, and index order of all the works published in the country from the colonial period down to the present time.

The section of exchanges and acquisitions, which has supervision of the lecture courses, arranges lectures on art, science, and industry in the reading room for such hours as it is not in use by readers. The attendance at such lectures is select and the results are pleasing, as a marked increase is noted in the demand for works dealing with the subject of each lecture delivered. In 1912 there were 24 such lectures given; in 1913 the number increased to 28; to 40 in 1914; to 73 in 1915; and to 45 in 1916.

In 1916 this same section offered courses in German, English, French, and shorthand without cost to the State and with pleasing

results, since the number of readers who were able to use the books in foreign languages was thereby greatly increased. The average hours of classes given monthly was 125 and the average attendance 130.

But the principal task of this section is the acquisition of new books, for which careful selection is made from Europe and the United States, the subjects most used being works on applied sciences, not only as a result of the lectures given at the institution but because of the general interest and industrial awakening being experienced in the country to-day. The needs and requests of the patrons are taken into consideration as well as the deficiencies in the library, and the result is that modern textbooks, for example, in engineering, architecture, beaux arts, technical subjects, sociology, and medicine, are acquired.

With the American section a bureau of general information is connected, with its material classified in a convenient form. It is observed that questions usually deal with the organization and methods used in North American universities, which are of great interest to Chilean young people. This office was created in response to the resolution approved at the Second Pan-American Scientific Congress held in Washington in 1915-16, by which it was decided to found a "Pan-American Bibliographical Union" with a bureau of information concerning Pan-American subjects to be established in every national library of America. The Chilean National Library was the first to respond, and is indebted to the governments, the universities, and libraries of the entire continent for their cooperation in the matter. Most of the data, tracts, and pamphlets received are from the United States and refer to mining and agricultural problems and experiments of importance to the mining and cattle industries of this country.

Many literary and scientific organizations have been organized with headquarters in the library, such as the Chilean Geographical and Historical Society, which gives lectures and publishes the Chilean Geographical and Historical Review, which describes the discoveries and progress made by the society. The Chilean Language Academy, corresponding to the Royal Spanish Academy, also is established in the library, as is the Chilean Scientific Society—both influential organizations fortunate in having authoritative collaborators.

The Library would never have been able to conduct these various activities had not the Government given it hearty support and encouragement. In response to the imperious need of the hour, when it was seen that the library was receiving periodicals and books which it had no space to file, the Government provided for a new building and appointed a commission to select a suitable site.

The sum of 3,300,000 pesos was appropriated for the purchase of the old Monastery de las Claras, on the Alameda de las Delicias, at the foot of the Santa Lucía hill, with an extent of 11,900 square

meters, upon which, in addition to the library building, the historical museum and the general archives of the nation will be housed. The first stone of the new building was laid in August of 1913. Five large buildings are to be erected, three of which are to be occupied by the library and the other two for the purposes mentioned. In the center of the square the large reading room, of reinforced concrete, and the women's reading room will be built, with a double dome and adequate space for three sections for storing books, with steel shelving for 1,000,000 volumes. The newspapers and magazines will be placed in the basement. Besides the larger reading rooms there are to be four smaller ones for 60 persons each, for the following specific purposes: Newspapers and magazine reference work; children's material, and women's reading matter and technical studies. A small circular hall for consultation and trying musical scores will also be provided.

Twelve small classrooms for seminaries are part of the plan, as in many such institutions of Europe and the United States. The results of the studies herein conducted under specialists in the several branches of art or science are to be kept under lock and key in other suites. The collection of Don José Toribio, the Chilean bibliographer, is to be kept in a large hall on the second floor, as Senor Toribio has offered to donate his entire library of 30,000 valuable volumes, largely of bibliography and history, to the institution. The Medina Hall will undoubtedly form the foundation of a bibliographical and historical seminary in which researchers, utilizing the material at hand, will be ever reminded of the generosity of the man who made their studies possible.

Including the reading room, special offices, classrooms, etc., it is estimated that the institution will accommodate comfortably 700 readers. It is interesting to study the mechanical system by which time is to be saved to readers and unnecessary work avoided by employees in the reading room.

The patron finds on either side of the entrance hall two special offices of catalogues or indices, the one for scientific and historical books and the other for purely literary matter. When he has obtained the book desired, he goes to the reading room and there, in absolute silence, may study as long as he wishes. Upon leaving he places the book in the hands of an employee in the entrance hall. In the index offices an employee sends for his especial book through a pneumatic tube and it is delivered by a mechanical carrier. In this manner it is unnecessary for employees to lose time in hunting hither and yon for books of divergent characters.

A large lecture hall also is being planned, with a capacity for 800 persons, apart from other halls, in which scientific or literary societies may meet. The board of directors expects to make the lectures an important feature of the institution when it enters its new home.

The historical and military museums, at present quartered in the Palace of Beaux Arts, will be established in the building to be dedicated to the national historical museum. The general archives of the nation, as previously indicated, will be housed in another building. They also form a distinctive group of documents, and foreign scholars have made trips to the country specifically for the purpose of studying them. In the same place the governmental, judicial, notarial, and administrative archives will be guarded, as well as certain parochial records and those of private citizens, which may form valuable commentaries on the historical significance of various events in the history of the country. All will be arranged in the manner most convenient for facilitating the work of students.

Work on the new edifice is proceeding rapidly, and it is not too optimistic to predict that by the middle of 1920 its formal opening may take place, according to the opinion of the director general of public works, who is directing the erection and who designed the plans, together with the assistance of his staff.

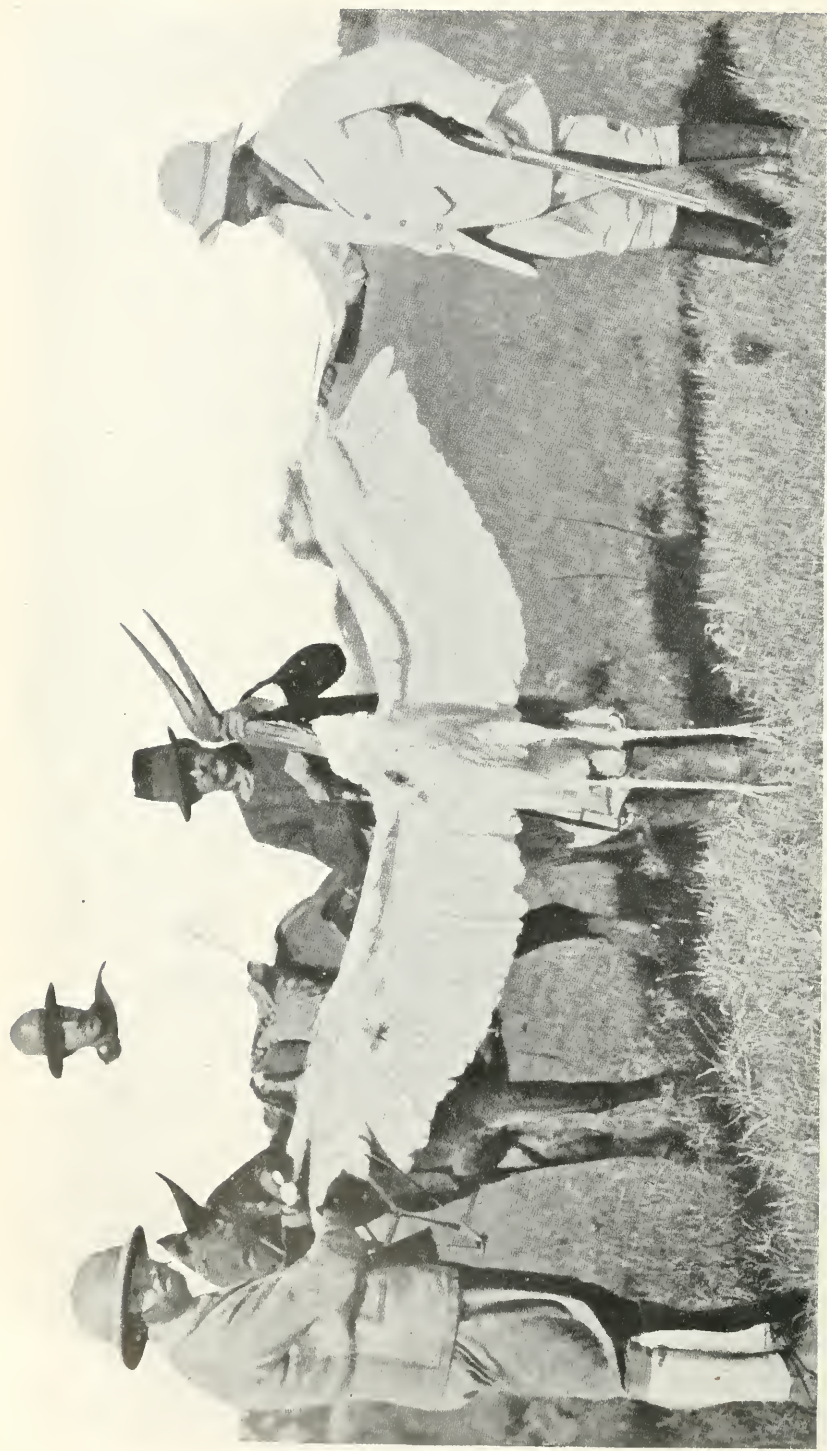
ACROSS THE CHACO¹

THE northern boundary of Argentina where it joins Bolivia and Paraguay is formed largely by a picturesque territory, in which the Pilcomayo River forms large lakes or lagoons, on the margins of which dwell tribes of somewhat rebellious Indians of considerable importance, who still conserve, by their wild and even savage manner of life, the manners and customs of the primitive peoples of the Americas.

This corner of the Republic, composed of dense forests and limitless plains, was recently visited by Don Aarón de Anchorena, Don Justo del Carril, and other distinguished travelers from Buenos Aires, who in an interesting hunt buried themselves deep in the Chaco region, under the escort of regular soldiers furnished by Gen. Oliveira César, chief of that military zone.

From the town of Formosa, where the party received the most courteous attentions from the authorities, especially the governor of the territory, they proceeded by railway to the station of Frontera, where they completed the necessary preparations for the cross-country expedition. Thence they journeyed northward on horse and mule back through Ubite, a Russian colony, the last point inhabited by white men, to the small Fort Pegalda. Then they went to the Yunka, returning through the canyon which extends for 18 leagues from its

¹ English version of an article by Antonio Pérez-Valiente, in "Plus Ultra," of Buenos Aires.



Courtesy of Plus Ultra, Buenos Aires.

THE "JUYUYÚ CUARTELERO", KING OF THE BIRDS OF THE CHACO.

opening between Fort Chaves on the Bolivian border and kilometer 286 of the railroad to Embarcacion. They thus covered a distance of approximately 160 leagues on horseback.

Señor Anchorena's fondness for the hunt had led him in former years to undertake long journeys across many distant and varying countries. The heart of Africa, Japan, California, the Siberian steppes, and the regions about Tierra del Fuego had all been the scenes of his daring hunts, in which he was never daunted by the vicissitudes and inevitable perils pertaining to excursions of that character.

During the 40 days the expeditionists spent in the vicinity of Formosa they had abundant opportunities to admire that aspect of nature in which the land is covered with an immense expanse of woods and great swampy estuaries, the refuges of strange and ferocious animals.

Among the thickets of the forest the aguaiá, a species of hyena or wolf, occasionally glides in search of imaginary prey even into the camps of the natives; there, too, are to be found the ant bear; the armadillo, which leads what might be called a subterranean life; the deer; the sharp-tusked boar; and the agile and treacherous tiger.

Under perennial verdure, poisonous, game-destroying animals, reptiles, and velvety spiders are hid or curled about the trunks of trees which have stood a thousand years; and over the emerald ground glide snakes—rattlers, "corals," black and yellow serpents, and the yarará, which, like the others mentioned, spreads death with his sharp fangs.

The forest gives an impression of awesome solemnity; giant trees extend their branches like tentacles over the dense shrubbery and coppices, casting shadows shiftingly about the impenetrable labyrinth. Adorned with honeysuckles, jasmines and wild ivies, grow the *lignum vitæ* trees, the ñandipá, the alisas, the precious dark violet oba-poó, the suiñandí with its medicinal properties, and the yapitá, with its spherical fronds and thick rough leaves. Among the riot of plants, gay birds with iridescent breasts and crimson and purple plumage build their nests. Oaks rear themselves next to glossy-wooded trees, while all around are rose-colored lapachos, purple jacarandás, and the regal "dragon's blood," handsomest of all because of its brilliant green leaves blending into orange. Then there are the tangled "quebrachales," hardwood forests, stretching as far as the eye can see, and beyond them the estuaries, yellow and barren; then the marshes of stagnant water, and the rivers dividing into a thousand separate courses, leaving solitary little islands from which the blue-bird intones his morning song.

In the region of the Patiño estuary, chiefly in the section called "Lake Concentracion," the Pilagás Indians, perhaps the least



Courtesy of Plus Ultra, Buenos Aires.

PREPARING A MEAL FROM THE LEAVES OF THE PALM TREE.



Courtesy of Pius Ultra, Buenos Aires.

AMONG THE PILAGAS INDIANS.

Lying in front of the group of explorers and Pilagas Indians is a fine specimen of the tiger hunted in the deep forest of the Chaco.



Courtesy of Plus Ultra, Buenos Aires.

IN THE CAMP OF THE PILAGAS INDIANS.

civilized dwellers upon Argentinian soil, have their habitations. Through Bailon Benítez, a gaucho intimately familiar with the district, the hunters succeeded in obtaining an interview with the celebrated cacique, or chief, Garcete, who had ordered the assassination of Ibarreta, the explorer. Near the camp there remain to this day vestiges of the palm cross placed in his memory by the men who went out in search of his remains. The Pilagás, 4,000 or 5,000 in number, render tribute to Garcete, as the only chief of the tribe for whom they evince both admiration and esteem.

The customs of these ancient inhabitants of the Chaco region are indeed curious. They live almost exclusively by hunting and fishing, possess no cattle, and do not work for even short periods in the mills and shops in neighboring Provinces, as do the Tobas and Matacos of the southern section.

Recognizing the superiority of the firearm over primitive implements of warfare, it may be said that when they have obtained such a weapon, they have reached the height of their ambition. To insure themselves against the diseases which decimate them they build fires in the middle of their camps and dance around them while chanting weird vows to the moon.

The Indian knows no devotion. He looks upon his children with indifference and considers his wife a transitory and unimportant property. Addicted to alcohol, he gets drunk on "aloja," a strong drink made of the fruit of the algarroba, and also of honey of bees, hornets, and wasps of all kinds.

When a garzal (heron roost) is found in the woods, notice is given to the cacique, who has the finder declare his rights before the entire tribe, since this discovery is considered the greatest good fortune, because it permits the owner to buy munitions and arms with the price received for the rich plumage of the bird when sold by expert vendors in towns near by.

The crude industries of the Pilagá are reduced to the weaving of garments with which he robes himself, and the collecting of large quantities of stones and small calcined bones with which he makes necklaces and similar adornments.

When Pilagás go to the hunt they disguise themselves with yuyo, a wild herb, and hide in a thicket hours and hours until they discern in the distance a bird, which, if beyond the reach of their sure aim, they advance upon cautiously, pausing at the slightest movement of the probable prey, and they never shoot until sure of hitting the prey.

In fishing also they employ original methods. When flood waters of the Pilcomayo inundate the estuaries in the vicinity they stretch small reed nets skillfully in shallow parts of the river; then when a fish rises to the surface they let fly their darts and cleave them deftly.



Courtesy of Plus Ultra, Buenos Aires.

IN THE CAMP OF CHIEF GARCETE.

Chief Garcete is the head of some 4,000 or 5,000 Indians, who are probably the farthest removed from civilization among scattered aborigines found in the Argentine Republic.

The dwellings, constructed of dry branches and hardwood poles, form a kind of village in which they live as one family. All their possessions are held in common, and food as well as clothing is distributed according to individual needs.

The pronounced hatred which they feel toward the white man and his essentially warlike habits causes the Pilagás to live in constant uneasiness, yet refusing to be subjugated by the military forces from the forts. But in spite of the menacing attitude which they present in their frequent raids, the nomad tribes which hide along the disputed Bolivian and Paraguayan borders are even more dangerous, for they use the boundary question as a subterfuge which aids them materially in escaping punishment by the regulars; so they often manage to escape just punishment for the injuries they commit in their brutal forays, and for the cruelty and ferociousness of which they are guilty in the attacks. In the district comprehended between the Pilcomayo River and the railroad which connects Formosa and Embareacion: that is, in the 18 leagues from north to south in which rolling ground forms a break in the heart of the forest, the aborigines live in continual insurrection, causing the greatest disquietude among dwellers who venture into such perilous territory. The result of this circumstance is that this picturesque region, always exposed to barbarous outrages, is almost entirely unpopulated.

Considering the natural state of this section of the country, now abandoned by civilized settlers, the Government should undertake an efficacious campaign which would permit colonization therein. Above all, the erection of new forts and strengthening of those in existence should be attended to and the garrisons of frontier police increased, since the corps of 200 mounted police now guarding the boundary is found insufficient. This would doubtless encourage settling, which would be further stimulated by the granting of tracts to the Indians, who might thus be pacified, whereas they now look with fear upon any intrusion. They would then themselves profit by progress and contribute their share in conquering a new and profitable source of wealth for the nation.



THE CUBAN CANE-SUGAR INDUSTRY¹

A STALK of sugar cane somewhat resembles a bamboo stick. The section (internode) or distance between the joints or nodes is generally from 4 to 8 inches and extends the whole length of the cane from the root to the top, where there is a mass of long, ribbonlike leaves. Unlike the remainder of the cane the top sections are not sweet, containing glucose and being unfit for sugar making.

The height attained by cane varies considerably, depending upon the richness of the soil, the degree of cultivation received, the rainfall during the growing season, and the number of crops previously gathered from the same roots. A period of drought or heavy rains will leave its imprint unmistakably upon those sections of the cane which are being formed at that time, drought causing them to remain short and stunted, while heavy rains result in their growing long and rank. Fully matured cane in Cuba, grown under normal conditions, stands in the fields at an average height of from 8 to 12 feet, although canes are sometimes seen growing to a height of 20 feet and over. A field of sugar cane, especially when the cane is still young, resembles a cornfield. Later, when the cane is fully grown and the leaves have attained their normal size, the resemblance is much less.

The principal seasons for planting cane in Cuba are spring and fall, the former extending from March to June and the latter from September to January. The cane takes from 12 to 15 months to mature. After it has been cut down, new cane comes up from the same roots, and the field has to be weeded and cultivated as it was for the first crop. The second crop can be cut after 12 months, and the operation repeated a year later. The number of crops which can be harvested from one planting differs according to the quality of the soil, varying from six to eight crops on medium lands to considerably more on the best lands, some areas having been known to produce profitably for 20 years or more. Virgin lands, from which the forests have been cut, produce the heaviest cane, although it is not usually as rich in sucrose as is the case in the older lands. A yield of from

¹ This article by Mr. P. K. Reynolds, of the United Fruit Co., appeared in the January, 1919, number of *The Cuba Review*. The story covers the sugar industry from the planting of the cane to the refining of the final product in a most comprehensive manner. Cane sugar is one of the products of practically every country comprised in the Pan American Union and a detailed explanation of the methods employed in the industry by the United Fruit Co., which owns some 75,000 acres of growing cane and two large sugar mills in Cuba, besides a great refining plant in Boston, Mass., should be of general interest throughout the Americas.



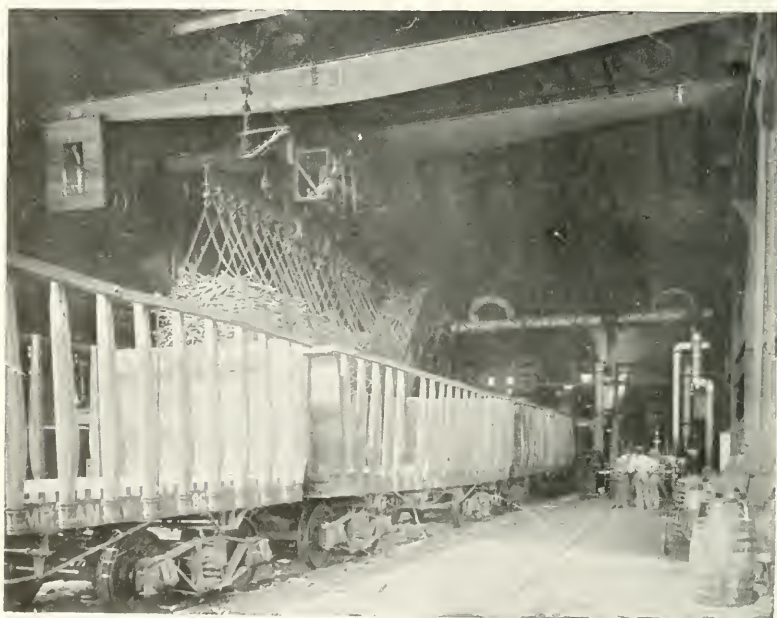
CUTTING SUGAR CANE BY HAND.

Cane cutting is a laborious hand process and so far no mechanical cane cutting device has been invented that gives satisfactory results.



HAULING CANE BY OXEN TO THE RAILROAD.

The piles of cut cane are loaded into two-wheeled bull carts and hauled to the railroad siding for loading.



TRANSPORTING AND UNLOADING SUGAR CANE.

Upper picture: Full trainloads of cane are being hauled to the mill, or "central," constantly during the cutting season. The train shown here has 30 loaded cars. Lower picture: Lifting cane from the cars at the mill.

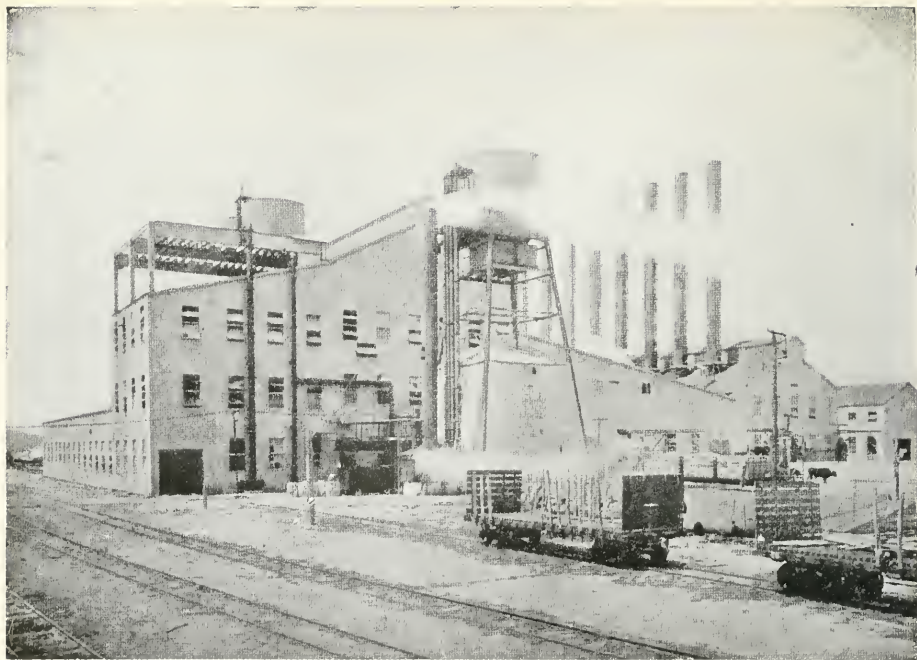
33 to 45 tons (2,240 pounds each) of cane per acre may be obtained from virgin lands, sometimes even more, whereas the average yield in the island does not exceed 18 or 20 tons per acre.

In preparing virgin land for planting the trees and underbrush are first cut down and all good hard timber is taken out and saved for building purposes. A certain portion of the other wood is cut up and delivered to the mill, to be used later on as fuel. The remaining timber and bush which can not be utilized in any way is allowed to dry out after being cut down and is then burned. Patches that remain unburned are piled in heaps and reburned so as to clear the land as much as possible. The land is now in condition for planting and the fields are laid out generally in squares of about 20 acres each.

Ground for replanting is prepared by plowing first in one direction and then across; sometimes it is given a third plowing. Plowing is generally done with oxen or bulls. Usually two yoke of oxen are used, sometimes as many as three to each plow. The United Fruit Co. has in operation four large steam plows which are used principally in plowing the older fields. The field is then harrowed and a light plow traces the furrows in which cane is to be planted.

The cane to be used for planting is selected and cut into lengths of two internodes, allowing three nodes to each length, so as to have three buds or eyes, and is laid by hand in the bed of the furrows, lengthwise with it, sometimes end to end, and at other times a space of about 12 inches being left between the sticks. Occasionally two sticks of cane are laid in the furrow, parallel to each other and a few inches apart. A light plow is run alongside the furrow and the earth turned over to cover the cane. If the ground is damp and in good condition the cane may be expected to show itself above the ground in about three weeks' time. Weeds also soon make their appearance, and the work of destroying them should not be delayed. This is done by hoes and by running a cultivator and a light plow between the rows of cane. Both oxen and mules are used in the cultivation. The operation of weeding must be repeated as often as necessary, never less than three times, until the cane leaves have grown so that they completely shade the ground and prevent the sun from penetrating to the soil. On account of the stumps remaining in new land, even after burning, planting has to be done with hoes or else by means of a sharp-pointed stick, in the hand of a man who walks across the field guided by stakes previously set at proper distances, the rows being lined out with a tapeline, and who thrusts the stick in a slanting direction into the ground, making a hole into which one or two pieces of cane are inserted and the earth is pressed tightly around it.

The methods of planting cane vary considerably, as do also the distances between the rows. In Cuba cane is generally planted in rectangles of 5 by 5 feet to 6 by 8 feet, 5 by 5 feet and 6 feet being



CENTRAL "BOSTON" AT BANES, CUBA.

The distinction between a "central" and a refinery is that at the "central" the operation consists of only crushing the cane and extracting the raw sugar. The sugar is then sent in jute bags to the refinery, where it is purified and transformed into various grades and shapes.

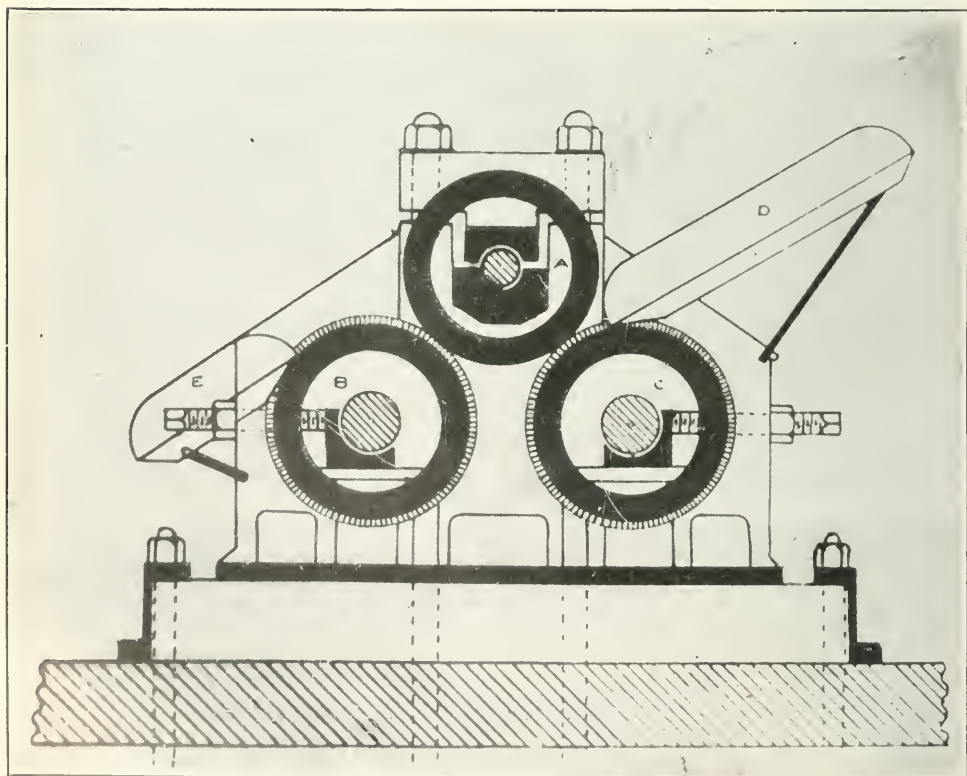
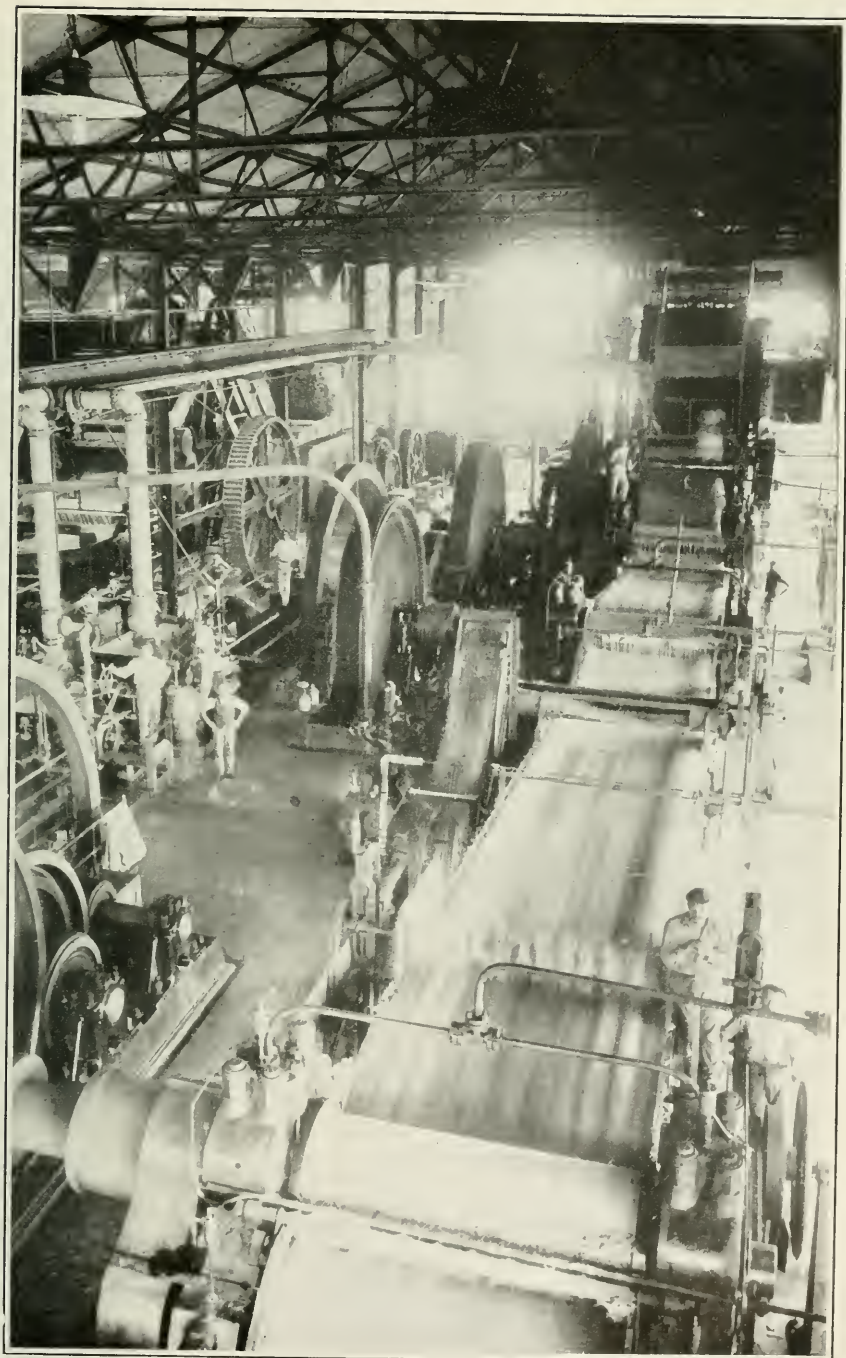


DIAGRAM OF A SUGAR MILL.

Each mill consists of three horizontal steel rolls, from $4\frac{1}{2}$ to 7 feet long and from 21 to 36 inches in diameter, set with parallel axes as shown in the above sketch. The cane passes through the top roll (A) and the first bottom roll (C), and then between the top roll and the second bottom roll (B), so that the cane is crushed twice in each mill.



Courtesy of La Hacienda.

INTERIOR OF A CUBAN SUGAR MILL.

The average milling plant consists of two grinding units or tandems paralleling each other, each comprising a crusher and three roller mills, each tandem being known as a nine-roller mill. The above picture shows a modern mill in operation.

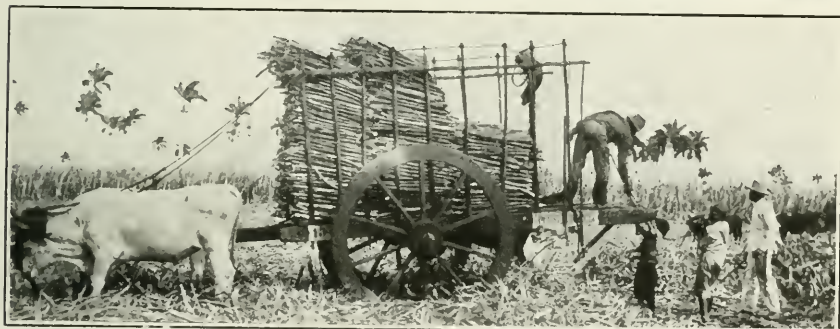
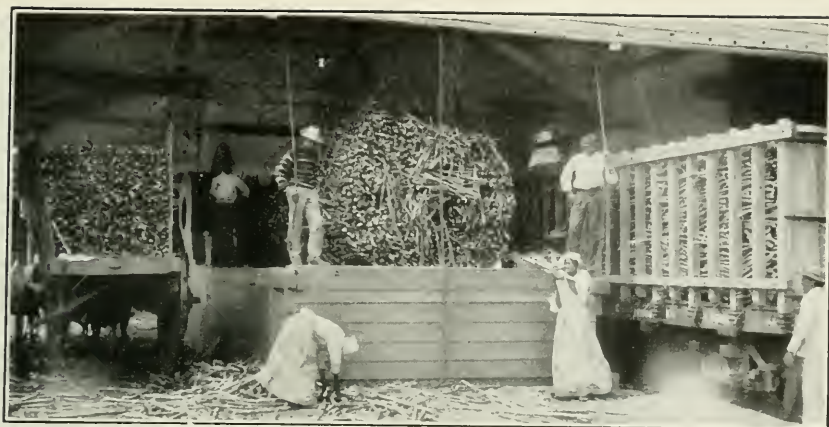
used in old plowed land, while 6 by 7 feet, 6 by 8 feet, and 7 by 7 feet are the custom in new forest land. Accidental fires, due to sparks from locomotives and other causes, constitute one of the most serious dangers to growing cane. In order to minimize the risk fire lines are established with an average width of 30 yards, which divide the cane fields into plots of about 20 acres. When the cane is ready for harvesting it is cut by hand with a cane knife. The leaves are first stripped from the matured stalk by using the back of the cane knife. The green top is then cut off and the matured stalk is cut even with the ground into lengths of from 3 to 4 feet and thrown into heaps. This green top, with its mass of leaves, is left in the fields, forming an excellent mulch, which prevents the growth of weeds and grass until such time as the new cane shades the ground. When the mulch decays it is valuable as a fertilizer. This cane trash also forms an excellent fodder for cattle on the plantation, being, in fact, their principal article of food during the crop season.

Cane cutting is the most serious labor problem which confronts the sugar planter in Cuba. In the first place, to operate the mill economically, it is necessary to furnish it with sufficient quantity of cane to keep it running night and day, while the sugar content of the cane is at the maximum. In the second place, cane cutting is a laborious hand process and the supply of labor is not sufficient for the island's needs. Thus far no mechanical cane-cutting device has been invented which gives satisfactory results.

The two methods used for delivering cane from the field to the factory are animal and mechanical transportation. The piles of cut cane are loaded into two-wheeled bull carts and hauled to the nearest railroad switch, where they are transferred to railroad cars by means of field cranes or sometimes by hand. The cane is then taken in trainloads to the mill, each car containing from 10 to 20 tons of cane, depending on the gauge of the railroad, whether narrow or standard gauge. The floor of the cane cars is usually constructed so as to admit the passing of iron chains underneath the cane on arrival at the mill to facilitate unloading, and on some estates automatic dumping devices are used.

The United Fruit Co. is now engaged in certain experiments which it is hoped will result in putting its agricultural department on a mechanical basis to a large extent, the idea being to eliminate as much as possible the use of hand labor and cattle. It is the policy of most of the sugar companies in Cuba to purchase a considerable portion of the cane going through their factory from outside growers who live sufficiently near the sugar mill. This policy encourages the planting of cane by individuals within a convenient radius. These growers are called "colonos."

At the beginning and close of the crop the sugar content of the cane is usually at a minimum. It is always the endeavor to grind cane



THE SUGAR INDUSTRY IN CUBA.

Upper picture: Loading cane into the hoppers in a Cuban sugar mill. Center picture: Taking the cane from the field to the factory. Lower picture: Loading cars to be hauled to the "central."



CARTS LOADED WITH SUGAR CANE.

These loaded carts are awaiting their turn to unload at a sugar factory in Cuba.

during the period of the maximum sugar content, although where large areas are involved it is necessary to commence cutting in the early part of December and extend operations to the middle of September. The average crop season, however, may be considered as from the middle of December to the end of June. Weather conditions in Cuba, which vary considerably from year to year and also in different parts of the island in any one year, materially affect the length of the grinding season and the sugar output of both the island and the individual provinces.

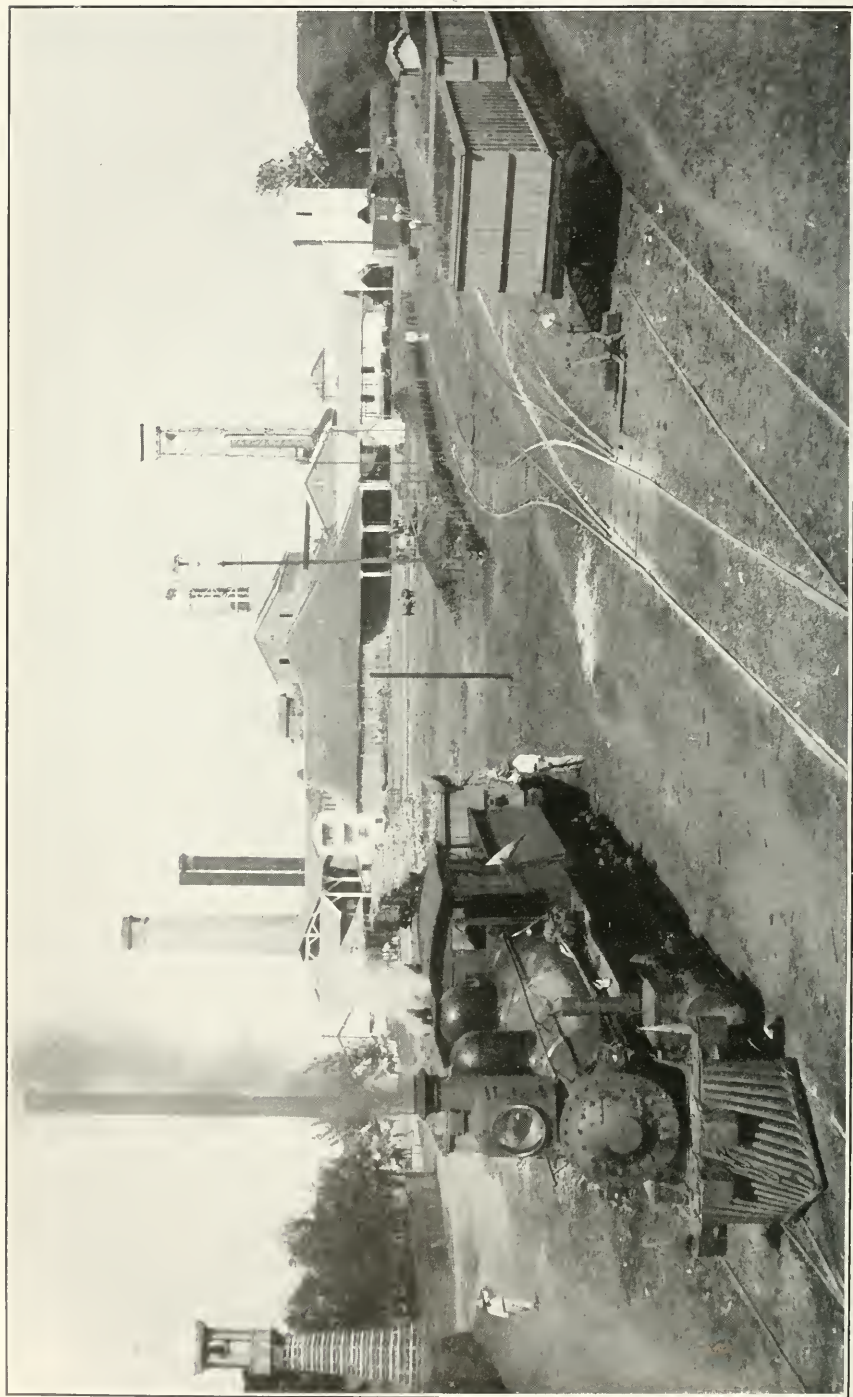
A sugar factory in Cuba is termed a "central." Without attempting to describe the many minor processes, the ordinary method of manufacturing raw sugar from cane may be considered under four general heads: 1, extraction of the juice; 2, clarification; 3, evaporation; 4, separation of the crystals.

The term "sucrose" is a theoretical one, indicating a sugar content of 100 per cent purity. The final product of a "central" is raw sugar of a light brown color, polarizing 96° , or sugar 96 per cent pure. Polarization is the method of determining the percentage of sucrose by the use of an instrument commonly known as the polariscope.

The percentage of juice extracted based on the total juice in the cane indicates the milling or grinding efficiency. The sucrose recovered from the sucrose extracted indicates boiling efficiency. The sucrose recovered in 96° test sugar from total sucrose in cane denotes general factory efficiency. These figures are of great value and interest to the factory management, as they serve as a guide in the manufacturing operations.

On the arrival of the cane at the sugar mill, or "central," it is lifted from the railroad cars by an electric crane and is weighed while suspended above the cane or feed hopper. After the cane has been weighed it is dropped into the feed hopper and is passed to the crusher by means of a link belt conveyor, after which it goes through the mills.

The average milling plant consists of two grinding units or tandems paralleling each other, each comprising a crusher (consisting of two corrugated rolls) and three three-roller mills, each tandem being known as a nine-roller mill. Some of the most modern plants are equipped with three and in some instances four tandems, each tandem comprising a crusher and four three-roller mills (some tandems even having five three-roller mills). The crusher resembles a mill, but the surface of the rolls is corrugated, so as to cut and partly crush the cane. This crushing operation facilitates the work of the mills and the extraction of the juice. The United Fruit Co. has adopted the double crusher and nine-roller mill, which is an original idea of its superintending engineer. Its centrals at Banes and Preston are equipped with four and three tandems, respectively.



SUGAR FACTORY IN CUBA.

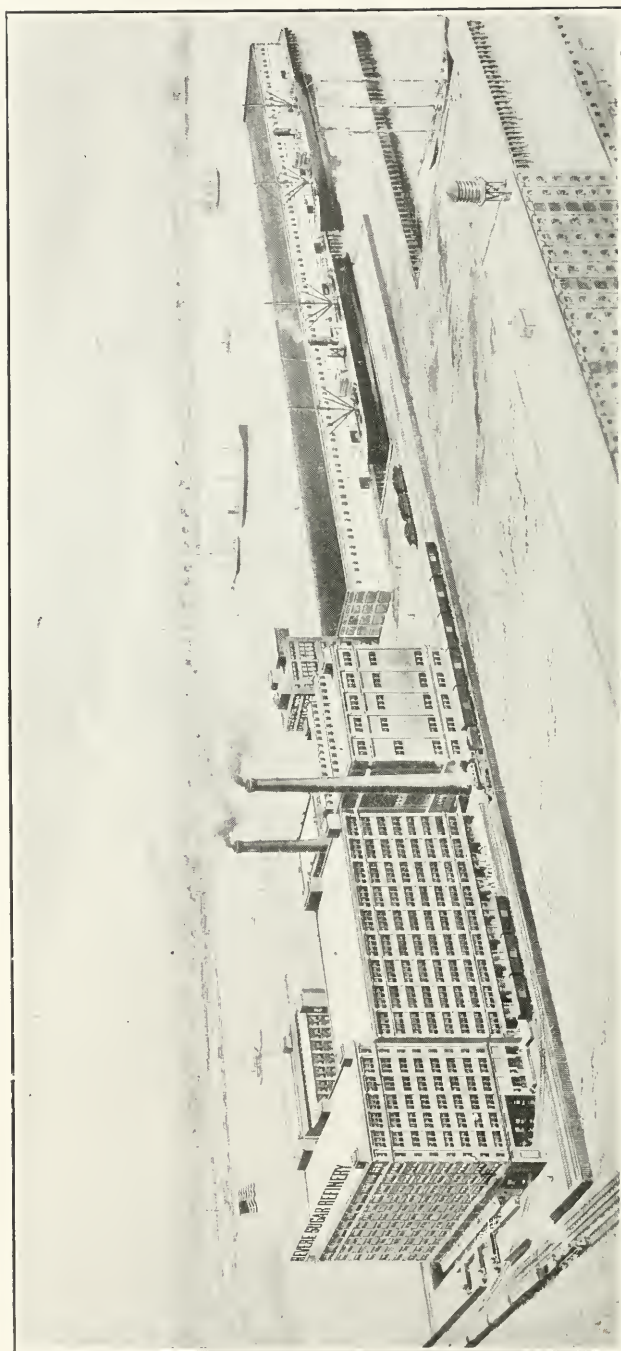
This picture shows the tracks leading up to the "central," where the cane is crushed. One of these "centrals" is usually located in the center of a large sugar-producing area.

In the average "central" each mill consists of three horizontal steel rolls from $4\frac{1}{2}$ to 7 feet long and from 24 to 36 inches in diameter, set with parallel axes as shown in the accompanying sketch. The rolls are set in adjustable bearings and the cane passes between the top roll (A) and the first bottom roll (C), and then between the top roll and the second bottom (B), which are set closer together, so that the cane is actually crushed twice in each mill. The cane passes through all of the mills in order that as much of the juice as possible may be extracted. The cane after it is crushed is termed "bagasse" and is conveyed by a carrier directly to the boiler furnaces where it is consumed as fuel. In many of the factories the cane leaving the second mill and sometimes that from the first mill is sprayed with hot water. This process of spraying water on the crushed cane is known as "maceration" and facilitates the extraction of the sucrose or sugar content in the cane.

The component parts of sugar cane are juice and fiber, the juice being known as the water or moisture of the cane with all its solids in solution. The juice is made of sucrose, moisture, and impurities, and these impurities, such as organic acids, nitrogenous bodies, etc., are partially removed from the raw extracted juice by the defecation or clarification process and in part accumulated in the final molasses.

The mixed juice coming from all the mills is first strained through wire screens or by link-belt strainers to remove particles of floating cane. It is then pumped to the top of the factory building and enters the liming tanks. Here milk of lime, about 15° Baumé, is added to neutralize the acids and is thoroughly mixed with the juice by means of compressed air. The limed juice is pumped into juice heaters where exhaust steam is used to raise the temperature of the juice to 215° or 220° F., and from these heaters the juice is discharged into settling tanks. The combined effect of the lime and the heat results in the formation of many mineral compounds which settle to the bottom of the tank, carrying down also some organic impurities which envelop the mineral particles. The greater part of the insoluble organic impurities, being lighter than the juice, is driven to the top by the act of boiling, forming a blanket of scum which rests on the body of juice.

The clear juice now lies between two layers of impurities, one at the bottom and one at the top, and is drawn off by means of cocks until the two layers meet. The entire mass of impurities called "cachaza" is washed with water into the scum tanks below where it is heated and settled and the clear juice drawn off, while the cachaza remaining is sent to the mud or filter presses. Here some juice is extracted by about 80 pounds pressure, and the impure mass, called "filter press cake," has still about 45 or 50 per cent moisture. This cake is dumped from the presses into a conveyor loaded into dump cars and sent to



THE REVERE SUGAR REFINERY, BOSTON, MASSACHUSETTS.
This modern sugar refinery is capable of turning out 3,500 barrels of sugar daily.

the fields, where after a period of several months it is valuable as a fertilizer.

The juice, which has been referred to previously as being drawn off from the settlers by cocks, is clear juice, and, together with the juice from the scum tanks and that from the presses, flows to the supply tanks of the evaporators. This clear juice is evaporated in a series of vessels, or "multiple effects," usually four in number, and called "quadruple effects," from a water content of 80 to 85 per cent to about 49 per cent, and is then called sirup or "meladura." This meladura flows into a tank on the ground floor, and from there it is pumped continuously to the storage tanks on the pan floor to be used in the vacuum pans as needed.

The meladura is drawn into pans by means of vacuum force, and is boiled under a vacuum of 26° to 27° . When the meladura boils down to proper density grains begin to form, and the quantity of grains and the building up of the grain is regulated by a well-trained man who is called the "sugar master," or "sugar boiler." When making first sugar, meladura is added as required until the pan is about seven-eighths full, and then it is finished with first molasses to reduce the average purity and to give color to the sugar. This panful of grains and extracted liquor is called "massecuite," and it is dropped at a density of 92° to 94° Brix into a "mixer" above the centrifugals. It is run into these machines charge by charge, and the crystals of sugar are separated from the molasses. Each charge of a centrifugal, usually 40 inches in diameter, gives nearly a bag of sugar. This is strictly "first sugar" and the molasses is "first molasses." The first molasses is pumped to tanks above the pan floor, where it is heated and diluted with water to a density of 30° Baumé and then run into storage tanks on the pan floor to be used in making crystallizer sugar.

When sugar is boiled for the crystallizers the grain is made with meladura so as to have a good nucleus. A pan is run up about two-thirds full and half of the mass is cut over to another pan, making two pans one-third full, which is sufficient grain to build on. Diluted first molasses is boiled on this grain until the pan is filled, then it is discharged into crystallizers which are of the same capacity as the vacuum pan. The length of time this massecuite should remain in the crystallizer depends on the kind of crystallizer and the grade of the massecuite. At some mills it requires from four to five days to get the best results. These crystallizers revolve slowly, and as they cool down the grain continues to grow until they reach the atmospheric temperature. This process might be said to be a mere continuation of the vacuum pan work, though it is much more economical and satisfactory than completing the work in the pan, a better separation of the grains from the molasses and

a better polarizing sugar being obtained. The crystallizer sugar gives an average polarization of 96° and sells as first sugar.

The crystallizers are situated above the centrifugals, and the massecuite when ready for drying is handled in the same manner as the first massecuite, described above. The molasses from the crystallizer massecuite is called "second molasses," and is pumped to the storage tanks on the pan floor, where it is heated to dissolve the fine grains, if any, before being drawn into the vacuum pan again. This molasses, according to its sucrose, is used the same as the first molasses, being boiled back until no more sugar can be economically obtained, when it is sold as "final molasses," or "blackstrap."

The refining of raw sugar is carried on in a refinery in distinction to a factory or "central," where the sugar is extracted from the cane. These sugar factories send their product, consisting of raw sugar more or less unsuitable for consumption, to the refineries, where it is purified and transformed into the different shapes as demanded by the individual taste or requirements of the consumer.

The cargoes of raw sugar are received at the refinery in jute bags holding about 325 pounds each. When discharged from the ships the sugar is weighed and sampled by employees of the Government to determine the amount of import duty to be collected thereon. It is then weighed and sampled by the representative of the seller and the refinery.

When the sugar enters the refinery the bags are cut open and emptied and the sugar carried by conveyors to the sugar bins. The sugar is then washed with water in the centrifugal machines to remove the impurities (mostly molasses) adhering to the outer surface of the crystals. From here the sugar passes to the melting pans, where it is dissolved in hot water.

This sugar solution, which is a dark-brown, cloudy liquor, is then pumped to the top of the filtering department, where the real refining commences. The solution is heated nearly to the boiling point in tanks called "blowups" and treated with filtering medium to make it evenly filtered. It is then passed through mechanical filters, which remove the suspended impurities, leaving a clear brown colored liquor. This liquor is then passed through filters filled with bone charcoal which remove all coloring matter, leaving the liquor as clear and colorless as the purest spring water. This bone charcoal is thoroughly washed with boiling water and burned in special kilns and is used over and over again until worn out. The solution, after filtration, is then pumped into the sugar house proper, where it is drawn into vacuum pans and concentrated at a low temperature until it has formed a mass of crystals mixed with a small quantity of sirup. This is a very important stage of the refining, as the

temperature at which the sugar is boiled and the method of forming the grain determine the grade of the finished sugar. The men who do this work, known as sugar boilers, are men of long experience and training, and unless their work is properly done the sugar will not be up to the standard.

The crystals are then separated from the sirup in centrifugal machines, after which the sugar is passed through driers and thoroughly dried. The dried sugar is separated in the various sizes by means of sieves and is ready to be put in barrels, bags, or cartons and sent out to the consumer. Pressed cubes and tablets are made from moistened granulated sugar. The sirup taken from the centrifugal machines is reboiled and yields the soft or brown sugar, and the final residue is sold as refinery sirup.

COURTESIES TO THE CHILEAN FINANCIAL COMMISSION

THE Chilean Financial Commission, one of the most important foreign delegations that has ever visited the United States, reached Washington April 12, having stopped on its way from New Orleans at Mobile, Birmingham, Chattanooga, and other places.

The commission is composed of men of international reputation who have taken an active and important part in the economic development of their country. Señor Don Eliodoro Yañez, head of the commission, is a senator and former premier of the Chilean cabinet; Señor Don Enrique Tocornal was formerly minister of finance, and Señor Don Augusto Villanueva is president of the Bank of Chile.

On the day following the arrival of these distinguished gentlemen in Washington His Excellency Henry P. Fletcher, American ambassador to Mexico, who was formerly ambassador to Chile, gave a luncheon in their honor, among other invited guests being His Excellency Señor Don Beltran Mathieu, Ambassador from Chile; the Acting Secretary of State of the United States, Mr. Frank Lyon Polk; Secretary of Commerce William C. Redfield; Assistant Secretary of the Treasury Dr. L. S. Rowe; Senator Hitchcock, of Nebraska, and various officials of the Departments of State, Commerce, and the Treasury.

After several days' stay in Washington, during which the visitors were extended many other courtesies, the commission proceeded to

New York, where, on April 21, they were the guests of honor at a notable luncheon given by the Pan American Society of the United States at the Bankers' Club.

Upon this occasion, in addition to the special guests of honor, a number of prominent Chileans who were in New York at the time were also guests. Among these were His Excellency Señor Don Augustin Edwards, Chilean minister to Great Britain; His Excellency Señor Don Beltran Mathieu, Chilean ambassador to the United States; Admiral Luis Gomez Carreño, chief of the Chilean naval commission appointed to attend the peace conference at Paris; Señor Don Pedro Aguirre Cerda, formerly minister of public instruction in Chile, and Gen. A. Pinto Concha, former minister of war and chief of staff of the Chilean Army.

Prof. John Bassett Moore, president of the Pan American Society, presided at the luncheon and welcomed the visitors in his usual eloquent manner, closing his address as follows:

Upon the present occasion, however, our thoughts are necessarily somewhat preoccupied with international and particularly with Pan American relations. In surveying these relations one is struck with the gradual decline, certainly in a relative sense, of the political quality by which they were at one time almost exclusively characterized. This change has come about in the natural course of development. The American countries have come to look upon one another in a broader way. The interchange of thought has widened their horizon. The study of each other's institutions, not only political but legal, social, and educational, has given them a more intimate view of each other's life and contributed to mutual understanding.

And at length there has come about a marked expansion of commercial and financial relations. This expansion has proceeded not from artificial but from natural causes, and is destined to continue. The Pan American Financial Congress at Washington, in May, 1915, was but a sagacious recognition of the fact that, while man can not live by bread alone, he can not live without it.

Chile's greatness as a commercial and industrial power lies not behind her but before her. She has vast resources. Do we realize the fact that her coast line is longer than the route from New York to Liverpool, and that in this great reach she exhibits all varieties of soil and of climate? We have all heard of her nitrates, useful in peace as in war. When the kettle sings a cheerful accompaniment to the cricket on the hearth we perhaps may be indebted to copper from her mines. Her mineral wealth also embraces gold, silver, nickel, coal, and other invaluable substances. Her extensive forests are almost untouched. Her fields, her pastures, her fisheries, are capable of great development. Nor do I hesitate to affirm that the reputation abroad of the products of her vineyards is by no means commensurate with their merits.

A great South American statesman, at the opening of the Third International American Conference, well observed that commerce should be regarded as an exchange of benefits. A great statesman and orator whose name is a household word in the United States expressed almost 70 years ago the same thought when he thanked God that he was "not among those who regard whatsoever others have as so much withheld from themselves." Those just and generous sentiments constitute but an acknowledgment of that interdependence which ramifies all human relations, whether individual or national. Nations need each other; the American Republics need each other; and in the mutual satisfaction of their needs they should find themselves ever more closely drawn together in bonds of interest and of friendship.

In this spirit, which should pervade all the relations of the Americas, the Pan American Society to-day welcomes the Chilean Financial Commission to the financial center of the United States. In thus limiting my circumference to national boundaries I would avoid arousing susceptibilities abroad and trust that I shall excite none at home. But of one thing I can give the fullest assurance. Wherever in the United States they may go, they will find in the warmth and cordiality of their receptions no diversity of feeling whatever. If in this respect I have ventured to speak for New York, so I may say that New York speaks for the Nation.

Señor Eliodoro Yanez, though he was able to be present, was suffering from throat trouble, and in consequence it fell to his excellency the ambassador of Chile in the United States, Señor Don Beltran Mathieu, to speak in behalf of the commission. He said:

The Chilean commission has given me the honor to reply to Dr. Bassett Moore and to thank him and the society in the name of Chile so poetically described and appreciated by its president. Yes, my dear Professor Bassett Moore, Chile, our native land is a beautiful country, and we Chileans love it almost fiercely, with that indomitable fierceness of highlanders which you have given as an explanation of our patriotism. But, if this patriotism of ours is fiery it is not blind. We understand that it imposes upon us duties, and that the first of these is to "do our bit," however small, for the country is small, in the work of peace toward which the world aspires after the gory nightmare from which it has just awakened.

We need not make a great effort, for besides entailing our own benefit, it is quite consistent with our traditions. And were the narrative not too lengthy and out of place here I could show how our zeal for right has urged us to act, at times, against our immediate interests. We thoroughly appreciate the fact that, though the world lives on ideas, it feeds on bread. And that is why we work. By doing so with earnestness, we have succeeded in forming a vigorous and orderly population, interested in having good government to make certain the result of their efforts.

Nature has gifted us with riches not like the manna of the Israelites, but which require capital, industry, and labor to exploit them. This is the reason why we need foreign, and, to speak quite frankly, specially your help, even though it should make more burdensome the help which this wonderful country is giving to the whole world in order to save it from the economic wreck in which it is sinking.

Certainly, as Mr. Bassett Moore vividly phrases it, the copper exists in Chile for making the kettles which sing on your hearths; the nitrate also exists to repeat the miracle of multiplying the loaves, all the other substances exist which he mentions as necessary for your industries.

There is, in the same measure, the good will and earnestness of all Chileans, in the protection of our laws, and the prevalent order and good government so necessary, if all that is to be turned to useful account by capital and industrial training, by the spirit of enterprise, in short, by the combination of the elements of success which characterizes this great American people.

The Chilean commission considers itself most fortunate to be able to come into contact with such a prominent group of men in this wonderful country, and it raises its glasses to the ever-increasing greatness of the United States, the city of New York, and the Pan American Society.

Mr. Paul Warburg, formerly member of the Federal Reserve Board and who was a member of the International High Commission which visited South America under the leadership of former Secretary McAdoo, was then called upon by the chairman to speak. He referred briefly to his trip to Chile on that occasion and spoke of the credit facilities that were being developed in this country for the

benefit of its export trade and for foreign countries, and hoped that greater advantage would be taken of the increasing facilities in trade acceptances.

The Hon. John Barrett, Director General of the Pan American Union, was the next speaker, who, in a few well chosen words, spoke of the wave of interest that had come to his notice at the headquarters of the Pan American Union from all parts of the United States in regard to the Chilean Financial Commission, whose members, he said, had made a splendid impression. They were giving the people of this country the realization of the growing importance of Chile as a factor in western civilization. He had observed considerable interest from all educational centers for information concerning Chile and its progress, as well as an ever-increasing tendency toward the idea of developing the right kind of Pan Americanism which meant a mutual understanding tending toward a mutual benefit.

Señor Carlos Silva Vildasola, a prominent Chilean journalist, special correspondent of *El Mercurio* of Valparaiso, who has just returned from Europe, where he witnessed the great struggle, was the next speaker. He said he had no official position, but appeared only as a newspaper man; but he wished to remark that there was one potent factor which must not be neglected, and that was the press; that it would be difficult to have real Pan Americanism or a league of nations of a successful character to bind the world together if public opinion can not be created to back the men who are working for those ideals. There has been, he said, in the past some considerable misunderstanding in Chile regarding the United States and doubtless in the United States regarding Chile, but he said that these countries are rediscovering one another. For many years we have been misled and have misunderstood each other and have been victims of journalistic sensationalism. Señor Silva advocated some joint action by newspapers and news agencies by which they might formulate a definite policy toward Pan Americanism. This, he believed, was essential to back up the acts of publicists and diplomats, without which he thought their efforts could have little effect. He raised his glass to the union of public opinion in the American countries and to the success and prosperity of the Pan American Society.

Henry Prather Fletcher, ambassador of the United States to Mexico and former ambassador to Chile, spoke briefly and referred to the five years he had spent in that country. He had many friends there and spoke highly of their admirable qualities. He was glad to see that at least something concrete along the lines of Pan Americanism was being developed. Referring to the financial situation of Chile, he called attention to the strength of its credit and mentioned that during the Chilean civil war in 1890 both the Government and its opponents offered to be responsible for the foreign debt of the country, so anxious were they that Chile's credit should not be imperiled.

THE ECONOMIC PROBLEMS OF SOUTH AMERICA¹

THE Revolution in America did something more than emancipate the countries which for three centuries had been subject to Iberian dominion—it liberated, in the fullest sense. It bequeathed to us not alone states, in the cold, I may say, Germanic, meaning of the term; it left us states-nations—that is to say, people sovereign over themselves, complete masters of their own destinies, possessed of the political instruments which permitted them to lay the foundation for their own future. But the American Revolution becomes more significant when we consider that by freeing a continent it enthroned forever therein peace, harmony, and a reciprocal understanding of the nations comprising the vast territory. Happily we, the sons of the New World, know that no crazed tyrant thirsts for dominion upon our soil; we are aware that in no obscure corner is bred the germ of a criminal despotism. Neither race hatreds, monastic caprice, implacable religious intolerance, nor even deep or serious economic rivalries poison our American hearts, disturb our minds or blind our eyes. This recognition we owe to the freemen of America. Humble generations, some isolated upon the deserts, without roads, without ports, without railroads, lacking schools and hospitals, wrote the brightest page of American independence. Fate allotted them the most glorious of conquests—that of human liberty, without which, according to a philosopher, life would not be worth the living; the invaluable attribute to the dignity of being which to-day some nations advanced in form and economic progress still utterly lack.

In America the political frontiers are also the natural ones. Nevertheless, great turbulent rivers and high mountain ranges do not necessarily indicate that peoples of one language, one historical tradition, and a common ethnic origin are not living tranquilly within their respective territories. The geographical accidents I have just cited do not at all operate as barriers; on the contrary, they become ties that knit the more closely together, because the mountains have been bored that gigantic railroads might pass through the granitic bulks, and the rivers canalized to transform them into “mobile roads,” as Pascal called them. With tunnels, bridges, and “mobile highways” peoples eradicate their frontiers. If Latin-American countries have accomplished much in this field, much more remains for them to do. The sister nations of South

¹ By Italo Luis Grassi. From the *Revista de Ciencias Eeonomicas* of Buenos Aires.

America upon crossing the threshold of independence from their common mother must have faced the same economic problems, since they were political entities placed upon a vast continent, as a whole rich and fertile; uninhabited except by peoples of equal poverty, with infinite pampas and impenetrable forest throughout its entirety. Economically considered, all its inhabitants were poor peoples dwelling in rich territories, the reverse of the situation in Europe, the continent of poor countries inhabited by wealthy residents, according to the graphic expression of a thinker, Argentinian by birth but an American by the range of his works and the far-sightedness of his genius.¹

The foremost economic problem which occupied the governors in South America after the abolition of slavery was the necessity of a large and progressive population which should transform the desert into cultivated fields, dotted with thriving cities. Simultaneously were attained the conquest of barbarism, the victory over the desert, and the sanitation of a vast territory, which necessitated costly public works far above the financial resources of the underpopulated young continent which was only just emerging from the chaos of the struggle for political organization. It was then that Juan Bautista Alberdi said:

In America to govern is to populate. Population is the paramount necessity in South America, the gauge of the value of an administration. The minister of state who fails to double the census of the people every 10 years has frittered away his time in trifles and excesses.

So grave was this problem in the minds of the authors of the constitution of Argentina that they declared in the preamble as one of the prime motives for its adoption:

The promotion of the general well being and the insurance of the benefits of liberty to us, to our posterity, and to all men who may desire to inhabit Argentinian soil.

To attract desirable, industrious immigrants and cause them to settle permanently was the controlling thought of the founders of the nations of South America—an idea which grew up as a logical reaction against the pernicious politics of the mother country, which was adverse to all immigration. In Spain it was necessary to obtain special permission to go to the Indies. As late as 1758 it was decreed: "The corresponding exemplary punishments shall be executed in case of those found guilty of stowing away or embarking without permission." Then appeared agrarian laws which offered to the immigrant a parcel of land to be cultivated and on which to erect a home. And the governments, zealous of increasing the population, hit upon an extreme method—artificial encouragement of immigration, the only method available in those times, when it was hardly

¹ Juan B. Alberdi.

to be hoped that foreign workmen naturally could be induced to leave a country economically far in advance of the unpromising new, little-known countries which had only just entered the current of international traffic. This influence gave rise to the promulgation, on October 9, 1876, of the Argentinian law by which commissions were created to go to other lands in search of emigrants, for whom the State paid passage and gave lodging upon arrival in the country.

Brazil's independence was scarcely proclaimed, the martial war cry of Ipiranga yet resounded, when the Emperor Dom Pedro I, ambitious to be known as a colonizing monarch, took advantage of immigration from Europe to populate the southern part of the Kingdom, and especially the States of Santa Catharina and Rio Grande, a political movement which continued energetically under the decisive leadership of Dom Pedro II. Private colonization completed the task. In foreign countries, especially Germany, great enterprises were undertaken with the object of colonizing the fertile lands of the new Portugal, so that in 10 years (1890-1899) the State of São Paulo received almost 700,000 immigrants—Italians, Spaniards, Portuguese, and Austrians. Brazilian ports received, shortly before the European war (1911), 136,000 immigrants, the expenses of 56,000 of whom were defrayed by the Government. The Argentine Republic, most favorable to the current of European immigration, received in the space of 56 years (1857-1913) more than 5,000,000 of people, 3,297,000 of whom were definitely incorporated and are being assimilated. Without immigration "America would as yet be absolutely savage," was the somewhat exaggerated assertion of an Argentinian writer.

Foreign influence contributed materially to break the fruitful virgin soil of the New World and, together with the efforts of natives, spread the network of railroads, built cities, constructed ports, and dug canals, made noxious regions sanitary and exterminated epidemics. By dint of toil and vigilance traffic into the interior was made possible. New ways to commerce were opened and fresh fields for industries. Europeans intermarried with Spanish-Portuguese-Americans, and the transfusion raised the moral and intellectual level and made the South Americans to a degree European.

The influx of Europeans was entirely suspended at the outbreak of the war. We have argued a great deal over the effects the bloody conflict will have upon future immigration. It is impossible to predict with scientific accuracy what is to be expected for the young nations of America; and facing such uncertainty and doubt we see the necessity of establishing a demographic policy. In using this expression I mean nothing other than a policy that will assure the lives of those who are coming into the world, that will prolong the lives being lived to-day, and that will avoid premature deaths. In

short, the birth rate must be increased, death rate lowered (especially in the case of infant mortality), and the coefficient of the average life of the total population raised.

Fortunately, in the Argentine Republic the gravity of the problem has been realized. I say fortunately, because I am convinced that we are sure to arrive at a solution when we once understand and determine the seriousness of a problem.

The Argentinian Social Museum ("Museo Social Argentino"), a bureau of information, research, and social activity, one of the most prominent intellectual organizations of the country, has recently asked the opinions of our most brilliant thinkers on the matter. The following questions were put to them:

Do you believe that after the war the former migratory movement toward Argentina will be resumed? What factors, in your judgment, favor emigration in the warring countries? What class of immigration is most needed and what methods should be adopted to attract and retain such immigration? What class of immigration is undesirable, and how may it be prevented? What is the maximum number that the country can conveniently receive and retain yearly? What changes would you recommend in the immigration law?

It would be very interesting to put the same questions to the brightest minds of the other American countries, since the matter very evidently offers various aspects owing to the diversity of the spirit and nature of the field under consideration.

After the former immigration an abundant influx of foreign capital took place. It was poured in in such quantities that unexpected complications arose, which threatened, not the political stability of the country, but the very peace of the continent. With this capital railroads were extended, rivers made navigable, ports constructed, cities reared; in fine, the colossal skeleton which formed the framework for national advancement was erected. Here again a serious perplexity arises. The war also places upon the tapis the problem of the disposal of European capitals in these countries. Will it enter in such quantities as formerly? What securities will be given for its investment in railroads, ports, public works, exploitations, etc? The Spanish-American countries gained political independence at cost of tremendous sacrifices. Their economic independence, for which they are even now struggling, will be attained at cost of similar hardships and privations. The proceeds from foreign capital are as veritable mortgages upon them. Hence the imperious necessity of redeeming them, and, if that be impossible, the lessening of these burdens in so far as is humanly possible. An English author ironically observed that these countries "now can not afford the luxury of permitting themselves to repudiate their debts, must not permit themselves such extravagance, because they have reached so high a degree of economic development." What most deeply concerns us is not indeed the payment of debts, as

rather the lack of resources with which to meet them. Hence the nationalization of industry should be the watch cry of the Latin-American countries. It should be borne in mind that the influx of capital does not produce the same results as human immigration. The latter is susceptible of assimilation by the society which receives it, because it is made up of creatures of thought, sentiment, and affections who have migrated in the hope of founding new social unities, new families under conditions more nearly ideal. Capital, on the other hand, is not assimilated; it remains foreign; it continues in the possession of its original owners. The problem, then, consists in making political independence effectual through the complementary economic independence.

A moment ago we referred to railroads, the form of communication and transportation which, according to the scholarly political economist, Marshall, constitutes "the dominant factor in the economic life of every civilized country." We are all agreed that railways are not as yet sufficiently extended in South America; vast regions remain isolated from the world at large, with the corresponding detention of their economic and commercial progress. Railroad freight rates are still high. The cost of exploitation is so high that great ports of Latin-American countries receive manufactures and prime materials from the Old World, while almost inexhaustible stores of these very products lie within a few hundred kilometers. And freight rates are high because the produce crosses tremendous distances to go from one center to the next, and must traverse whole tracts in which trains make no stops because of the lack of a working, producing, trading class of people.

This is the case, for instance, of the Trans-Andine Railway by Juncal. Dr. Daniel Martner, professor of economics of the University of Chile, in his treatise upon the economic problems of that country, spoke of the difficulties to be overcome by the railway in the following significant words:

From the point of view of economics the Trans-Andine Railway has had to face the obstacles and impediments offered to every such enterprise by the scarcity of population in the countries through which it runs (five inhabitants to the square kilometer in Chile and between two and three in Argentina).

A few months ago a commission of Argentine and Chilean engineers, appointed by their respective Governments to study the problem of the Trans-Andine Railway, arrived at the same conclusions—that is, the high rates were the result of very limited traffic, contrary to the prevailing theory that the limited transportation was the result of high railway freights. Nevertheless it is true that in this case the customhouse duties imposed by both countries bear some relation to present conditions; they continue to hinder an active, thriving frontier trade.

In a lecture given in the College of Economics of Buenos Aires, Mr. Albert Hale, commercial attaché of the United States Embassy in the Argentine capital, in discussing the similarities and contrasts between the development of Argentina and his country, stated, in showing how much still remained for us to do in railroad building, that the Argentine Republic, with a surface of 3,000,000 of square kilometers, had 36,735 kilometers of railroad lines, while in the United States, of an extent of 9,000,000 square kilometers, there were 426,000 kilometers of railroads constructed; that is to say, in an extension three times as great there were twelve times as many kilometers of railway built already. May I generalize this comparison to all the South American countries? But there is something more interesting in this respect, and that is the extension of branches and ramifications that shall not only make possible but foster international railway communication. I am pleased to call attention to the interest the present Bolivian administration is taking in the building of the railway from La Quiaca to Zupiza, a line which will permit direct railroad communication between Buenos Aires and La Paz.

The South American countries themselves should solve these problems of unification and systematization, using their own resources instead of leaving them to foreign holding companies, which would finally control the railway policies of the continent. This would be perilous in the extreme. In Brazil, as well as in Argentina and Chile, all having long coast lines with many natural irregularities which offer facilities for the construction of harbors, there exists the same problem—that of deciding the proper rôle which the merchant marine has played up to the present time in domestic transportation, and in what way it has competed and does compete with land routes, and what problems this competition will present to the railroad companies. Chile has the serious problem of merchant marine versus longitudinal railway lines—two methods of transportation parallel throughout their entire length.

A similar situation exists in Argentina, which possesses a zone traversed by railroads along which run two navigable streams, on which there is developing an increasingly important river traffic. The exploitation of the latter method of transportation and the adoption of tariffs and customhouse procedure, which would facilitate this traffic in every possible way, is a serious problem in Argentina to-day, where we have already begun to burn the corn which was awaiting shipment to Europe because we lack sufficient equipment to carry to the great centers of consumption the fuel which nature has bestowed with lavish hand in our forests of Santiago del Estero, Tucuman, Chaco, and Misiones. A like situation arises in the petroleum of Comodoro Rivadavia. We experienced a crisis in the lack

of fuel, yet nevertheless we are possessed of rich forests and almost inexhaustible oil deposits.

We have considered population and transportation. We will not pause to note the almost absolute lack of trucking highways, because this problem has been dwelt upon by Brazilians in a number of instances. The lack or shortage of roads is an evil essentially South American. But do not let us complain too bitterly of this fact, because the roads we shall one day possess will be the result of our economic necessities, not of a militarism which demands broad routes over which legions are to set out for conquest, pillage, and havoc.

Let us now briefly consider industry, a form of activity so intimately linked with the problems of population and transportation that the former is a necessity to insure the consumption of manufactures and the second to send prime materials, working materials, and the finished product from one place to another. For the past four years foreign rivalry has not been formidable, owing to the isolation of the Old World by war, so that the growth of new industries in spite of the difficulties created for international commerce by the European struggle brings grave questions before our countries. When we speak of new industries we mean the investment of smaller or larger sums in constructions, installations, prime materials, etc. At the close of the fatal conflict the economic struggle will be no less keenly severe. New markets have been opened, new industries arisen; we have been obliged to manufacture products which it was formerly more convenient to bring from without; so that while the new tendencies of internal production must needs be defended, the old traders also will again knock at our doors in search of a mitigant to such disasters and detriments as the long, sanguinary war has occasioned to their own interests. The problems are all vast and complex, and their solution will be reached only through minute and detailed consideration.

Let us proceed to another important problem—that of the commercial policy which should be pursued by the countries of the New World; not to regulate their relations toward Europe, but for the guidance of their own inter-American traffic. Protective tariffs and free trade have furnished subjects for interminable debates, whether a political economy based upon treaties were best for those countries or it would be sufficient for them to brandish the weapon of customs duties.

It is sought to know if the only form of protection consists in the adoption of prohibitive duties, or if a sane and adequate protection of national interests may be accomplished through an intelligent demographic system of politics, or indeed by the lowering of transportation rates, modification of the tax system and the betterment of the technical and economic education or training of the masses. Collat-

eral questions herein enter by logical association of ideas, such as agricultural and industrial teaching, the mission of which is to contribute to scientific advancement of production. I believe it is a lamentable blindness which prevents us seeing how in these countries everything conspires against "protection," which I predict unequivocally would result dismally—in a war of tariffs, precursor of the war of men. It has been stated and repeated unto boredom that markets are not won by bombardment. But the forces of imperialism have not yet come to understand this axiom, the natural result of every system of exclusive and absorbent politics. And we are now witnessing the result of this economic tyranny in a country like Germany, where it was taught that the economic ideal of "cultured" nations was to be sufficient unto themselves. To the young nations of the New World this policy could never result happily. Neither could it ever be adopted permanently in all seriousness.

In this respect I may remind you of the intention Argentina held a few months ago of founding a true free trade program. A treaty establishing absolute free exchange with Paraguay was signed by representatives of both nations concerned. But Congress, influenced by local industrial interests, refused to ratify it. The attempt was further frustrated by the fact that Argentina had treaties of commerce with other countries in which the clause of the most favored nation was stipulated. The confusion which this treaty would have introduced in the economic relations of the Republic with other powers was used by enemies of the convention as a decisive argument, and Argentinian-Paraguayan free trade thus dissolved itself into a chimerical aspiration, though one which without doubt will not be long in becoming a reality.

Commerce, is simply the exchange of one product for another, and in this bargaining armies and ironclads have no proper share. Norman Angell, the genial English pacifist, cites an ironic illustration in his book "The Great Illusion": "If the British manufacturer," he says, "can make goods or cutlery or small merchandise at prices and qualities better than his rivals, the commerce will be his; otherwise, if his products are poorer or dearer or have no advantage to offset their undesirable qualities, the consumers will trade with his competitors in spite of all efforts of the 'dreadnoughts.'" And he adds, "Switzerland, without a 'dreadnought,' will drive the British manufacturer from the market, even in her own colonies, as she is doing even to-day."

The nations of the New World have the worthy mission of living in peace and of making of the continent a place in which the joy of life makes the living worth while. But to attain this ideal status it is necessary for the various peoples to know one another, to love each other, to be united, if not materially, at least spiritually. If our

parents had not become acquainted with each other back in their golden youth: if there had not been engendered that reciprocal sentiment known as love, we surely could not exist to-day. Among countries the same phenomenon takes place as amongst nations. In order to love another and to wed him it is necessary to know him. And differential tariffs, prohibitive taxes and "protectionist" policies do not bind together, do not offer opportunities for people to become acquainted. Since without becoming acquainted they can not love; hence they can not beget the future generation, directors of national destinies, who shall live peacefully together. May we as western nations profit by the spectacle of the disintegration of the European continent, upon the ruins of which the concepts and forms of a new humanity must inevitably flourish.

We have treated of some of the primary factors of economic activity and considered the many questions that must be resolved for the sake of progress, well being, happiness and prosperity; in fine, the greatest good of these our American nations. What is to be said of their present financial condition and the system of economy put into effect by the state? What of the monetary systems of the Latin American countries, which one economist defined as the régime of depreciated money, of the inconvertible bill? What of the tax system which bears most heavily upon the import-export commerce? The reform of the system of tributes in these countries is a problem as vital as it is gigantic. New sources of levy must be sought, new taxable products which unite the features found desirable in the light of experience and scientific theory. Long criticisms have been made concerning the present program of taxation, which Henry George, the North American political economist, qualified as taxes upon our very progress: that is, work, hygiene, sanitation, instruction, etc.

Let us make the nations of South America rich and prosperous in the worthier meaning of the term; not calculated in the number of her battleships and cannons but rather, as certain Brazilian scholars whom we have had the honor of hearing in the halls of the University of Buenos Aires, have declared, in the opportunities offered to all for the pursuit of happiness. Let us emphasize the greater good of ourselves and of our sister Republics, in the good of the masses, in the abolition or diminution of want and poverty; in better housing and clothing of the poor; in preparing to provide for the comfort of the aged and sick; in the prolonging of life and happiness; in unconscious discipline of the character through sustained effort and the most profitable employment of leisure; in the creation of a social atmosphere which shall make for family affections, dignity, and courtesy and all life's embellishments, not alone among those few favored by fortune but among the majority. And this will be accomplished only by an intelligent understanding of what constitute the foremost present-day problems of the continent—the economic.

THE ARGENTINE MINT¹

AMONG the several establishments in which engraving is done, and which are connected with the National Government of Argentina, the mint is undoubtedly the most important. Founded in the year 1880, it has been an institution of steadily increasing prominence and utility. The development it has already attained will in all probability be still further accentuated by certain changes projected by the Federal Government, among others the creation of a national printing office, under the direction of the



THE MINT, BUENOS AIRES, ARGENTINA.

mint. To the present director, Ing. Alfredo J. Orfila, whose ability and devotion are self-evident, the institution owes much of its success in recent years. Since he became director in 1911 he has introduced striking innovations and installed machinery and equipment in accordance with the latest inventions of modern technical experts. The casting plant, engraving and coining departments, after a long period of inactivity, have been operating for over a year in executing a contract made with the Banco de la República Oriental del Uruguay for the minting of 8,000,000 silver pieces, valued at 5,000,000 pesos Uruguayan, as authorized by a law promulgated January 3, 1916.

¹ From *El Arte Tipográfico* of New York.

The Banco de la República Oriental del Uruguay decided to put the work in the hands of the Argentine mint after considering several bids from other mints, including those of Paris, Birmingham, Berlin, Santiago de Chile, and Rio de Janeiro. The total cost of the contract will be 226,752 pesos Argentine, which represents the precise cost of production. The period agreed upon for the work is one year and a half from the time the first shipment of silver is received, providing the remittance be not less than 300 kilograms daily, which the plant could dispose of at the same rate, according to estimates. In the last months of the year 1916 the coinage was 464,147 fifty-centesimo pieces, of which 400,000 were shipped to Montevideo before December 31 of that year.

It is interesting to note that since 1896 gold or silver moneys had not been minted in the country, the national mint during the interim having coined only 5, 10, and 20 centavo nickel pieces, using for the purpose metal from Austria, which came in disks ready for stamping. The new Uruguayan minting, however, necessitates all phases of the process, from the alloy and smelting of the metal to the stamping of the finished disk. This fact has brought the added advantage of allowing the establishment to gather a group of competent workmen who are becoming experts in the series of processes involved. Up to the present time the pay roll shows that 21 operators have been used, at a daily cost of 112.40 pesos Argentine money.

During 1916 the following statistics illustrate the production and the relative importance of the various phases of work:

	Number of pieces coined.	Value in Argen- tine pesos.
Minting.....	3,594,095	911,360.88
Printing of bills.....	21,041,320	162,253,500.00
Printing of bonds.....	1,407,594,037	189,783,982.90
Printing of bonds the denomination of which was not given.....	7,959,838	.....
Miscellaneous work.....	1,399,445	.....
Total annual production.....	1,441,578,735	352,948,843.78

In the past 10 years the mint has extended its functions to include most of the printing and engraving work in the Federal offices. The following report illustrates the statement: In 1907 the value of paid jobs was 36,883 Argentine pesos, and in 1916 this amount had increased to 202,172 pesos.

In addition to this number of official tasks of definite valuations, new and independent offices have intrusted similar work to the mint, so that at present it has the most up-to-date apparatus necessary for work of this character, however exacting the nature. All extra outside work paid for in cash is really beneficial to the institution, since it relieves the cost of producing official material by means of the receipts, all of which are added to the general treasury.



ENGRAVING ROOM OF THE ARGENTINE MINT, BUENOS AIRES.



SECTION OF RECOUNT AND REVISION OF VALUES IN THE
ARGENTINE MINT.

The mint does the printing and engraving required for the ministry of the treasury, the administration of territorial taxes, patents and seals, internal revenue, mails and telegraph systems, national postal savings bank, war administration, national lottery benefits, governments of the various provinces and national offices, national educational council, department of labor, etc. Moreover, the municipal administration had the mint to print the first series of municipal bonds, lithographs with two colors on the obverse and two on the reverse, valued at 5,000,000 pesos, distributed in certificates of 50, 100, 500, and 1,000 pesos, in colors varying according to value. The treasury of the Province of Santa Fe had printed its internal consolidated debt coupons, and the ministry of the treasury had it print 22,000,000 pesos gold bonds of the "Argentine internal credit" and 13,630,400 pesos Argentine in bonds of the "Argentine internal credit," law 6492. The number of postage stamps issued last year was 223,299,362, valued at 12,728,757 pesos. Also 21,041,320 bank bills were printed.

The perfection of the new series of postage stamps is largely owing to the new typographical system employed for lithographing and in the application of perfected revolving machines. An excellent new machine of this type is under construction at present in the United States.

Another of the services of the mint is the burning of bills left from a fiscal period, as provided by the laws in force, before entering upon a new fiscal period. The mint has a place especially for the purpose of depositing and counting such bills, a furnace, and staff of assistants.

The mint has an ample building on the corner of Defensa and Mexico Streets, the entrance for cars being on Balcarce Street. The working plant is on the lower floor and the administrative offices on the upper floors. It occupies a surface of 5,103 square meters altogether, with a two-story building on one portion of it and a three-story on another. The capital invested in the building, equipment, furnishings, and goods contained therein totals 2,472,000 pesos.



AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINA.

The Minister of Public Works decided on March 17 last that the Bureau of Hydraulics, Bridges, and Roads should immediately commence the PAVING OF THE ROAD from La Plata to Bahia Blanca. This same office is to continue the study of the section of the road between Olavaria and Bahia Blanca.

The Minister of the Treasury issued, under date of February 27 last, an order concerning COMMERCIAL TRANSIT from Chile, with the object of eliminating the delays and difficulties of lading and unlading goods originating in Chile and consigned abroad, via Buenos Aires.

A report submitted by the official in charge of the exploitation of the Comodoro Rivadavia PETROLEUM DEPOSITS shows that the production in 1918 was 197,000 cubic meters of oil, or 16,000 cubic meters more than that of the previous year. The production in 1919 is estimated at 230,000 cubic meters.

BOLIVIA.

During the year 1918 there were 3,418 tons of TUNGSTEN exported from the country, officially valued at 10,640,392 bolivianos (boliviano = \$0.389 United States gold), as against 3,890 tons, valued at 10,810,291 bolivianos in 1917. The 1918 exportation of tungsten was distributed in the following manner: United States, 2,328 tons; Great Britain and France, 437; 367 tons therefore remained at the ports of embarkation and en route. From 1909 to 1918 Bolivia exported 12,831 tons of tungsten ores, valued at 30,458,161 bolivianos.

By presidential decree of February 13, Chayanta Province in the Department of Potosi will comprise a MINING DISTRICT within the present political boundaries. On June 1 of the present year the new mining district will be appraised and assessed for taxation.

According to statistics from the Bolivian consulate at Puno, 564,116 parcels of FREIGHT, with a total weight of 29,719,635 kilograms, were handled through the customhouse of that port.

The agency of Corocoro has been raised to the class of a NATIONAL CUSTOMHOUSE, to function independently of the northern customhouse. The new office is authorized to import merchandise for the city of Corocoro and other cities of the Province of Pacajes, and to export minerals, such as copper, from that Province.

Since the office of DIRECTOR GENERAL OF AGRICULTURE has been established the ministry of that industry has convened an

assembly for the nomination of the person to fill the office. Candidates must present a statement of the plans they would inaugurate in discharging the duties of the office and the methods they would adopt for its organization in case of election.

BRAZIL.

In January and February last the value of EXPORTS from Santos amounted, respectively, to 45,951 and 65,721 contos, or a total of 111,672 contos (gold conto = \$546.20). Among these exports coffee represents 85,795 contos; rice, 9,216; chilled meats, 4,421; and beans, 7,694 contos.

During the latter part of March last two Portuguese capitalists visited the federal capital in connection with business concerning the installation of a NEW STEAMSHIP LINE between Portugal and Brazil. The enterprise is capitalized at approximately \$15,000,000. The capitalists referred to also propose to open a branch of the Bank of Portugal in the city of Sao Paulo.

At the suggestion of Senhor Alcino dos Santos Silva, consul of Brazil at Bern, a SWISS-BRAZILIAN BOARD OF TRADE has been founded in that city under the presidency of A. de Souza Aguiar.

The Board of Trade of Sydney has taken steps to encourage an interchange of COMMERCE BETWEEN AUSTRALIA AND BRAZIL. It recommends the establishment of a direct line of Lloyd Brazilian vessels to bring Brazilian products to Australian ports, returning to Brazil laden with wheat, coal, and other Australian merchandise.

The Federation of British Industries has invited BRAZILIAN BUSINESS MEN to visit Great Britain. Representatives of Brazilian commerce and industry who accept the invitation are to be the guests of the federation from the time of their departure until their return, the visit to have an official character. While in Great Britain they will be taken through the principal industrial centers of the country and will be given an opportunity to study such industrial conditions as may be of interest to them. Mr. Barclay, a member of the British commission which visited South America with Sir Maurice De Bunsen, will go to Brazil to accompany the visitors on the trip.

The President has specified the dates for the construction and delivery of the following RAILWAY LINES: From São Sebastião do Paraíso to Passos, December, 1920; the Biguatinga to Jacuhy extension, February 24, 1921; and November 15, 1921, for the Pratinha to Santa Rita de Cassia branch and the extension from Passos to kilometer 24.5 toward São Jose de la Barra.

CHILE.

Among the companies engaged in the exploitation of COPPER in Chile, the Chile Exploration Co., whose mines are at Calama, Province of Antofagasta, occupies first place. The capital of this company is \$100,000,000, which, according to reports, is soon to be tripled. The installations of the company cover 20 kilometers, and the mining population numbers 14,000. The annual production is 55,000 tons of pure electrolytic copper, all of which is exported to the United States.

The MINING INDUSTRY is undergoing a period of great activity in northern Chile, where the mineral wealth is enormous. A number of commissions of Chilean and foreign engineers are now making a study of this zone. In the Department of Elqui, Province of Coquimbo, the following mines are being exploited: In the vicinity of the Turbio and Cordillera Rivers, 8 silver, 4 copper, and 3 gold mines; near Claro River, 2 gold and 2 silver mines; and on the Elqui River 5 copper, 2 silver, 1 ferric sulphate, 1 iron, and 1 pyrite mines.

On the Chumay property, Province of Malleco, a number of COAL DEPOSITS have been discovered. Mr. Felsch, an experienced geologist, has been appointed by the Department of Industry and Public Works to visit the property mentioned with the object of reporting upon the richness of the mines.

The representatives of the allied countries in Santiago have advised the government that the Interallied War Board established in Paris has decided to deliver to the United States the German vessels interned in Chilean ports, the delivery to be made as soon as the United States desires. There are 84 of these ships, some of which are steamers and some sailing vessels, and nearly all of which formerly belonged to the Kosmos Navigation Co.

Chile's NATIONAL MERCHANT MARINE has been increased by two vessels, built by Mario Ibar in his shipbuilding yards at Constitucion. The two sailing vessels referred to have been christened *Toquí* and *Cacique*, and have a capacity of 450 and 500 tons, respectively.

COLOMBIA.

Representatives of the Marconi Wireless Telegraph Co. recently contracted with the Department of Home Government of Colombia to install an INTERNATIONAL WIRELESS TELEGRAPH STATION in Bogotá powerful enough to establish communications between Colombia and the countries of North and South America. This station will be used for commercial and government messages. The Government of Colombia did not grant the Marconi company any special concession, and is, therefore, free to negotiate in future

with other wireless companies should it be deemed expedient so to do. The Bogotá station, according to press reports, is to be the most powerful in South America, and will form the center of wireless communications between North and South America. It will have sufficient power to communicate direct with England and Japan. Important rate concessions, amounting to not less than 40 per cent of the cable charges, will be made on government, commercial, and newspaper business. The plans are now ready, but it is estimated that about two years will be needed in which to construct and equip the station for public service.

One of the most important matters now being considered by the legislature of the Department of Cundinamarca is the **EXTENSION OF THE SABANA RAILWAY** with the objects of facilitating traffic and in order to avoid the inconveniences connected with the navigation of the Upper Magdalena River. On March 1 last the Secretary of the Treasury explained in detail to the members of the legislature the reports of the technical commission appointed to study the extension of the railway, stating that the enterprise is feasible and requesting the legislature not to hesitate in authorizing the government of the Department of Cundinamarca to negotiate a loan to be used in the construction of the 200 kilometers of line necessary to be built. The proposed railway will extend through a well-watered grazing country, rich in coffee, timber, and coal. Recommendations were made that the national congress give a subsidy for the construction of this line which will penetrate territory inhabited by at least 2,000,000 people. Legislative committees were appointed to examine the railway and to study the legal relations between the Department and the Nation with the object of determining whether it is necessary to negotiate a national loan or simply a loan of the Department.

The **CARIBBEAN STEAMSHIP CO.** has established an agency at Medellín under the direction of Ricardo Lalinde. This company, whose stockholders are nationals and foreigners, which was founded by Alexander Angel & Co., of New York, operates a number of vessels and is very popular in Colombia.

Representatives of the Federal Export Co., an important **UNITED STATES COMMERCIAL CONCERN**, recently arrived at Barranquilla for the purpose of establishing a branch there.

The Board of Trade of Cali has received a communication from the Department of Commerce of the United States inquiring as to the prospects for **EXPORTS OF COAL**. Due to the location of the coal fields on the Pacific coast, it is believed that exports could be easily made, and would, in course of time, develop into a large business. In order to encourage this industry the Government of Colombia last year exempted coal from fluvial imposts.

The legislature of the Department of Antioquia has approved the first reading of the bill authorizing the construction of a RAILWAY from a point on the Amaga Railroad and the Department of Caldas to Antioquia. The bill authorizes the governor to negotiate a loan of \$5,000,000.

The manager of the AERIAL CABLE company, who has just arrived at Manizales, states that the Esperanza Station, which is three leagues from the City of Manizales, will be inaugurated in October next.

The President of the Republic has approved the steps taken by the government of the Department of Santander concerning the reorganization of the PUERTO WILCHES RAILWAY. An agreement has been made to receive at par in Santander the bonds issued by the Government, and to use the proceeds of same, or \$120,000 in extending, in so far as possible, the present railway.

COSTA RICA.

By a presidential decree of March 22 the regulations of RAILWAY PASSES which may be issued by government officials are stated in such a way as to eliminate annoyance to railway companies and cause no deficits in the public treasury.

Since the Chemical Commercial Laboratory has reported that "MAICENA" is a corn starch extracted in the same manner that starches are extracted from wheat, potatoes, yucca, etc., the President on February 21 passed a decree authorizing customshouses to appraise it at the rate of starch, or at 0.20 céntimos of a colon (colon = \$0.46 U. S. gold) per kilogram.

The appropriation for the President to expend in the repair of HIGHWAYS, roads and bridges has been raised to 300,000 colones, and he is furthermore authorized to conduct the work in the manner he sees fit.

CUBA.

Several caballerías (caballería = $33\frac{1}{3}$ acres) of land in Camaguey have been planted to CASTOR BEANS in anticipation of producing raw material for the manufacture at that place of lubricating oil.

According to data compiled by the Department of Agriculture the SUGAR arriving at Cuban ports from interior points of the Island up to the beginning of April amounted to 1,900,000 tons, while the stock on hand in the centrals aggregated not less than 400,000 tons, or an average of about 14,000 sacks to each of the 195 sugar centrals of the Republic. The quantity manufactured to the date referred to in all of the sugar centrals of the country totaled 2,300,000 tons.

A new SUGAR FACTORY is being installed in the Province of Oriente between Cristo and Songo with an estimated output of from

50,000 to 60,000 tons. This factory is to be supplied from cane grown on 100 caballerías of land.

A number of Americans representing brewing interests of the United States recently visited Habana for the purpose of investigating the advisability of establishing a BREWERY in or near the national capital.

Six of the largest LOCOMOTIVES ever brought into Cuba have just arrived in Habana from the United States for the use of the United Railways of Cuba.

The Cuban NAVIGATION CO. has purchased two more vessels for the purpose of enabling it to more satisfactorily handle its growing business.

DOMINICAN REPUBLIC.

The military government has declared an AGRICULTURAL ZONE the territory composed of the section of Jamao and the Comun and Province of Moca comprised between the following boundaries: South to the summit of the Cordillera Central range; east to the Arroyo Blanco river; north to Rico Jamao; and west to the Arroyo Frío river.

Several capitalists of the United States are interested in the project of constructing a RAILWAY which, extending from the port of Manzanillo harbor, shall traverse the northwestern territory, passing near Santiago and along the southern part of the Yaque and extending nearly to the pines region, terminating at La Vega.

The inducing of LABORERS to emigrate to foreign countries for employment by means of collective or individual offers of remuneration or material compensation before the 1st of April, 1921, is prohibited under penalty of a fine of not less than 100 pesos or more than 500, or imprisonment of not less than two months or more than six, except by special permission of the President.

During the month of February the DOMINICAN CENTRAL RAILWAY transported 1,481,315 kilos of freight from Puerto Plata to the interior; 1,212,603 kilos from the interior to Puerto Plata; and 443,659 kilos to intermediate stations.

ECUADOR.

According to the statistics contained in the GENERAL REPORT OF THE IMPORTS AND EXPORTS OF MERCHANDISE IN 1917, recently published by the Customs-House of Guayaquil, the value of the foreign commerce of Ecuador in 1917 amounted to 54,498,111 sucres (sucre = \$0.4867 U. S. gold), or 33,558,014 sucres for exportations and 20,940,097 for importations, which gives a difference in favor of the former of 12,617,917 sucres. It is interesting to note that in 1913, before the European war, the exports totaled

32,488,410 sucres in value and the imports 18,187,988. The difference of 1,000,000 sucres in the former and 3,000,000 in the latter shows that Ecuador's foreign trade did not suffer to the extent that was feared.

GUATEMALA.

According to the General Board of Customs the FOREIGN COMMERCE in 1918 was valued at \$19,785,021—an increase of \$2,919,990 over the year 1917.

During the year 1918 MINERAL EXPLOITATION was carried on extensively in the Republic, as 4,000 tons of iron and chromium were produced in the Departments of El Progreso and Jalapa; 60,000 cubic yards of earth were mined in the Las Quebradas gold mines, Department of Izabal; and in the Department of Huehuetenango 17 seams of lead were exploited profitably.

The Central Railway Co. is completing a commodious STATION in Guatemala City which will add to the attractiveness of the capital city.

In 1918 the National Government conducted many PUBLIC WORKS and improvements, laying 77 kilometers of new highways, repairing 577 kilometers of wagon roads and 1,479 of railway, constructing 83 bridges and repairing 46, and erecting 105 government buildings, and financing 178 in various parts of the Republic.

In 1918 a VACCINATION WARD was installed, the maternity ward modernized, and work was begun upon four new wards in the Guatemala General Hospital.

HAITI.

According to *Les Annales Capeises*, a Haitian newspaper, an analysis made in France of the SEEDS of the sand-box tree (*Hura crepitans*) has shown that a much larger quantity of oil can be extracted from these seeds than from the castor beans. Should the sand-box oil prove to be as valuable to the industry as the castor oil—and some experts believe it will—Haiti would largely benefit by the discovery of this new vegetal product, for the tree thrives in the greater part of the Republic.

Up to the middle of April 520,000 tons of SUGAR CANE had been received at the plant of the Haitian Sugar Co.—a new plant which began its operations only a short time ago.

The Government has entered into a contract with the Caribbean Agency, of New York, whereby the latter receives for a period of nine years the exclusive privilege of gathering the bark on all the MANGROVES to be found in the territory of the communes of Fort Liberte, Terrier Rouge, Caracol, and Limonade; the Caribbean Agency agreed to pay a duty of \$1 per ton of bark exported.

HONDURAS.

The National Government has granted certain privileges and concessions for the establishment of the following **NEW MANUFACTORIES**: In La Ceiba, one of perfumes of all kinds; in San Pedro Sula, of perfumes, sugar, and alcohols; in the Department of Cortes, of alcoholic liquors, both strong and light wines; and a shoe factory with a tannery for hides in the city of San Pedro Sula.

Early in March the **RAILWAY** which is being constructed by Vaccaro Bros. Co. reached the point known as La Ceibita, which is near the terminus of the railway which connects with Tela.

The National Congress has recently authorized the modification of the contract signed between the President and the Vaccaro Bros. Co. for the construction of a **PIER IN LA CEIBA** and a railroad connecting it with the city of Yoro. Among other concessions the contract allows an extension of four years in which the company may complete the railway, while the company relinquishes the land it held for the purpose of constructing branches, with the exception of these within 5 kilometers of the main line.

The government has granted concessions to Mr. J. P. Henderson for the production, exploitation, refining, and exportation of **OIL, COAL, NAPHTHA, AND OTHER MINERALS** discovered in the Departments of Tegucigalpa, Olancho, Santa Barbara, and Mosquitia.

A law of the National Congress of February 17, 1919, prohibits the **IMPORTATION OF STRONG OR LIGHT ALCOHOLIC LIQUORS** in barrels or other containers except bottles. Table wines are excepted from the list.

Permission has been granted for the exploitation of **NITRATE DEPOSITS** in the departments of La Paz, Intubuca, Comayagua, Gracias, and Tegucigalpa.

MEXICO.

The Department of Industry, Commerce, and Labor has sent a number of **SAMPLES OF MEXICAN FABRICS** to the Mexican consulate at Valparaiso, Chile, to form a part of the permanent exhibit conducted by the consulate. A large proportion of the samples was produced in the factories of the State of Vera Cruz, and it is expected that the exhibit will increase the growing popularity of Mexican manufactures in Chile.

According to a Mexican railroad expert the **ROLLING STOCK** owned by the national railways of the country to-day includes 1,300 locomotives and 19,800 cars, while 158 locomotives and 3,263 box-cars owned or rented by private companies are operating over federal lines.

With the object of stimulating the RECONSTRUCTION OF RAILWAY SYSTEMS the President on February 15 passed a decree declaring the railroad equipment listed in part 138 of the Importation Tariff Schedule free of duty for a period of six months.

The general board of directors of the Mexican National Railways has approved plans for the construction of a LARGE CENTRAL OFFICE in Mexico City. The building will be modern in every respect and will include commodious offices for the various departments.

A UNITED STATES CHAMBER OF COMMERCE was recently organized in Monterey by enterprising North Americans of the city.

The total exportation of HENEQUEN from Yucatan for the year 1918 has been estimated at 600,000 bales. The Henequen Administration (Comisión Reguladora del Henequén) is active in developing factories for its consumption in the territory, so that it is expected the exportation of henequen in the future will include not only the raw material but also manufactured sacks and twine.

A PERMANENT COMMERCIAL EXPOSITION is shortly to be established in Spain containing Mexican products. The project was undertaken owing to the pleasing results of a similar exposition established in New York some time ago.

The Department of Agriculture and Commerce has decided upon the construction of a PORT and well-equipped harbor in Espiritu Santo Bay in order to facilitate the exportation of products from the territory of Quintana Roo by the Caribbean Sea.

NICARAGUA.

A SUGAR MILL has just been installed in the Department of Rivas by a well-known Nicaraguan firm, the machinery having been received at Corinto.

Recently a shipment of touring AUTOMOBILES was received in the country. The machines are of different makes, and since great interest is being manifested in the improvement of roads it is expected that the 30 autotrucks which also arrived will be of great service.

A contract signed between the Ministry of Industry and Señor Samuel Zemurray, by which the latter agrees to develop SUGAR-CANE CULTIVATION in the land of the Capuzano plantation, Department of Chinandega, and in adjacent territory which may be bought or rented by him, has been submitted to the legislatures for approval. The privilege is also granted Señor Zemurray of establishing stock farms, cheese factories, butter, and other factories for the utilization of dairy products. As soon as possible he will establish also a steamship service between various ports of the Republic and Europe; the vessels will call at Playa Grande or any designated port of the Estero Real or Gulf of Fonseca.

PANAMA.

On March 14, 1919, the President signed a contract with Señor A. H. Verrill granting to the latter the exclusive rights of mining exploitations in a territory of 3,000 hectares in the districts of San Francisco and Santiago, the concessionaire agreeing to build at his own expense the following **MACADAMIZED ROADS**: One from the port of Aguadulce to the district of San Francisco, and one from Puerto Mutis to Santiago. According to the Panamanian press the enterprise will mean a saving of not less than \$600,000 for the Government, calculating the length of the roads at 50 miles and their cost at the rate of \$12,000 per mile.

British subjects residing on the Atlantic side of the Isthmus have taken preliminary steps toward the establishment of an **ENGLISH CHAMBER OF COMMERCE** in the Republic of Panama with the purpose of stimulating trade between the two nations.

PARAGUAY.

Señors José Pirotta, Enrique Prous, and Miguel Rueda have been elected president, vice president, and treasurer, respectively, of the **CHAMBER OF COMMERCE** of Asuncion.

By a presidential decree of February 24, **EMPTY CASES** intended to inclose domestic products to be exported are hereafter to be admitted free of duty.

The daily newspaper La Tribuna of Asuncion has recently installed a **ROTARY PRINTING PRESS** of the most modern type.

The Council of Agriculture and Industry of the Agricultural Bank has voted to authorize the purchase of **COTTON** of the present crop, fixing the price at 3 pesos currency per kilo of cotton of the first grade, or white, dry, and clean, and 2 pesos for second-grade cotton.

PERU.

The traffic bureau of the municipality of Lima has published a report showing the number of **AUTOMOBILES PRIVATELY AND PUBLICLY OWNED**, as shown by the registration of cars at that office. Since 1907, the year in which the first machine was received in the city, automobiles have played an increasingly prominent part in the development of Lima. According to the statistics given, in 1915, there were 171 private and 60 public cars licensed; in 1916 the figures increased to 219 and 43, respectively, and in 1918, to 699 and 200. Beginning with 1915, many of the automobiles imported have come from the United States.

The President has been authorized by congress to construct an **AUTOMOBILE HIGHWAY** which shall extend from the terminal

point of the Vitor to Valle de Majes highway to the city of Chuquibamba, capital of the Province of Condesuyos.

The sum of 5,000 pounds (Peruvian pound equals \$4.8665 United States gold) has been appropriated for the ACQUISITION OF DREDGES to be employed in removing obstacles to navigation in the Amazon River and its tributaries. The national congress has authorized the construction of a BRANCH RAILWAY from kilometer 76 of the Chimbote-Recuay line at Chuquicara to Cajabambilla.

URUGUAY.

The annual agricultural report for the year 1917-18 has just been published. It contains information of interest concerning the rural production for the term indicated, showing that Uruguay continues to be one of the foremost stock-raising countries. The latest census reveals the fact that of the 18,692,600 hectares used in agricultural enterprises, 11,159,012 are devoted to the breeding and pasturage of CATTLE and 4,047,805 hectares to both agriculture and stock raising. The importance of stock raising can be seen also from the fact that in 1917 the total value of exports from Uruguay was 92,516,274 pesos, of which 90,383,534 or 97.7 per cent was stock products. Cattle as well as sheep raising has suffered a marked decrease, however, since in 1908 there were 8,192,602 cattle in the country, as against 7,802,412 in 1916, and in 1908 there were 26,286,296 sheep, compared with 11,472,852 in 1916. The census of 1916 showed also that ranchmen prefer Lincoln and similar English breeds to short-wooled merinos.

A book has recently been published in Uruguay concerning the GRAPE INDUSTRY in the Republic, according to which in 1916 there was an area of 6,170 hectares in the country employed in the growing of vines, with 24,872,474 vine stocks. In 1916 there were 33,262,529 kilograms of grapes produced, the production and imports of wine in that year being 24,210,133 liters.

VENEZUELA.

The Caribbean Steamship Co. (Ltd.), has recently established a new LINE OF STEAMSHIPS between New York and Puerto Cabello and Maracaibo. One of the company's ships a short time ago weighed anchor in Maracaibo with a cargo of 11,338 sacks of coffee, the largest amount which ever has been embarked on one vessel in the history of shipping in that port.

The National Government has sent a committee of engineers to study the project of an EASTERN HIGHWAY which will connect Caracas with Ciudad Bolivar, traversing the eastern section of the entire country. The completion of the work will undoubtedly



Photograph by Underwood & Underwood.

"ATUELVAN CARAS."

This famous painting of the Venezuelan artist, Arturo Michelena, which is in the City Hall of New York, represents the climax in the battle of Quereguas del Medio, the first centenary of which was celebrated April 3, 1919. In this engagement, which has formed the theme of epic poems and is the most thrilling in the history of Spanish-American independence, 150 platinos of Venezuela under the command of General Antonio Paez, met 1,200 Spanish cavalrymen under Morillo. Apparently in flight, the Venezuelans when closely pursued turned suddenly at the command "¡Atuelvan Caras!" ("Atuelvan Caras") and counterattacked boldly. The Spanish infantry of 6,000 men, also engaged in the struggle, opened fire upon their own cavalry in attempting to aid them. A general panic ensued and the Spanish forces fled from the battlefield.

stimulate industrial development and commerce in the wealthy territories to be bisected, the district about Guaya, the eastern plains, and certain portions of the central region of the Republic lacking only a well-built road communicating with Caracas to develop their natural resources and build up a profitable export trade.

According to a newspaper of Trinidad the Central Asphalt Co., which owns more than 1,250,000 acres of land in Venezuela, must add over 10,000,000 dollars to its present investment in order to meet the demands of its constantly increasing business. One of the projects to which it will turn its attention is the exploitation of several OIL WELLS recently discovered in the fields of Mene Grande, in the western part of the Republic, for the use of which iron piping has already been installed, through which the oil will be conducted to the shores of Maracaibo Lake.



ECONOMIC AND FINANCIAL AFFAIRS

ARGENTINA.

According to the balance of the BANK OF THE ARGENTINE NATION for February last the deposits amounted to 3,174,418 gold pesos and 1,178,738,579 paper pesos, as compared with 3,175,523 gold pesos and 1,197,254,540 paper pesos in January, 1919. The discounts on accounts current amounted to 5,009 gold pesos and 260,547,279 paper pesos in February last, as compared with 5,009 gold pesos and 258,913,114 paper pesos during the previous month. The cash on hand on February 28 was 36,077,283 gold pesos and 345,767,773 paper pesos, as compared with 36,085,753 gold pesos and 341,767,908 paper pesos in January of the same year.

According to a report of the Bank of the Argentine Nation for 1918 that institution endeavored to lessen, in so far as possible, the effects of the adverse financial conditions caused by the war on Argentine producers by adopting measures tending to give them financial aid. In January, 1918, it offered to LEND MONEY ON PRODUCTS ready for shipment, either sacked or in bulk, the amounts being limited in individual cases to 10,000 pesos, currency, unless a special request was made and acted upon by the bank. In 1918 this bank loaned to agricultural producers 60,472,218 pesos, and 108,442,008 pesos to stockmen.

In 1918 the DEBT OF THE MUNICIPALITY OF BUENOS AIRES was made up of the following items: Consolidated foreign

debt, 27,637,153 pesos, gold; consolidated internal debt, 6,107,220 pesos currency; floating debt, 5,786,928 pesos, gold, and 47,770,423 pesos, currency.

The REVENUES of the municipality of Buenos Aires collected during the fiscal year 1918 amounted to 38,556,083 pesos, currency.

On March 10 last the CITY NATIONAL BANK OF NEW YORK opened to the public its branch in the city of Cordoba.

BOLIVIA.

In February the Bolivian Government decided to ANNUL THE CONTRACT WITH CHANDLER & CO. of New York, in which the latter company was made the fiscal agent of Bolivia for the United States. It was annulled because of the changes taking place in the financial market owing to the close of the European war.

During the year 1918 the net receipts of the COCHABAMBA ELECTRIC LIGHT & POWER CO. and of their railway lines amounted to 72,348 bolivianos (boliviano = \$0.389 United States gold). The capital of the company at present is 2,500,000 bolivianos.

The estimated general balance of the NATIONAL BUDGET FOR 1919 shows the receipts at 31,328,767 bolivianos and the expenditures at 38,471,853 bolivianos, leaving a deficit of 7,143,085.

BRAZIL.

Under a decree of December 31, 1918, the President of the Republic established the following reductions in duties on IMPORTS OF UNITED STATES MERCHANDISE: Wheat flour, 30 per cent; and 20 per cent on condensed milk; rubber goods; watches; colors included under Article 173 of the tariff (with the exception of writing ink and varnishes); typewriters; refrigerators; pianos; scales; wind mills; cement; dried fruits; and school and office furniture.

The GENERAL REVENUES of the Republic in 1918 amounted to 66,437 contos, gold, and 380,995 contos, paper, as follows: Import duties, 55,219 contos, gold, and 52,567 contos, paper; tax on consumption, 116,007 contos, paper; stamp tax, etc., 7 contos, gold, and 43,746 contos paper; tax on incomes, 94 contos, gold, and 14,901 contos, paper; tax on inheritances 598 contos, paper; tax on industrial revenues, 486, gold, and 96,109 contos, paper; extra revenues, 221, gold, and 38,933 contos, paper; special revenues, 10,407 contos, gold, and 14,766 contos, paper; lottery, 1,067 contos, paper, and other revenues, 3 contos, gold, and 2,301 contos, paper.

CHILE.

The year 1918 was very favorable to the development of the business of the SAVINGS BANKS of the Province of Nuble, as is shown

by the following figures, all values being expressed in Chilean paper pesos, which have an approximate value of about 20 cents, American gold: Total business, 100,953,890. Deposits in 1918, 41,084,544; repayments, 40,142,170; increase in 1918, 942,374; balance in 1917, 4,431,397; depositors' mortgage drafts, 729,911. Total deposits by depositors, 6,103,683.

The spirit of enterprise of the important Yugoslav colony of Punta Arenas, southern Chile, is attributed to the founding in that city on January 2, 1918, of the YUGOSLAV BANK OF CHILE with an initial capital of 1,000,000 pesos currency, which amount was increased in June, 1918, to 2,000,000 pesos. At the close of its first year's business this bank paid to its stockholders a dividend of 10 per cent. The bank has two branches—one at Porvenir, Tierra del Fuego, and the other at Natales, Ultima Esperanza—and now proposes to establish a third bank at Antofagasta in northern Chile, where there is an important Yugoslav colony.

COLOMBIA.

The municipal council of Medellin recently offered for public subscription the third series of the MUNICIPAL LOAN, the proceeds of which are to be used in purchasing and laying a new circuit of iron pipes for the water service of the city.

Information cabled from London states that five large banks from that city have formed an association with a capital of £2,000,000 for the purpose of organizing a bank in Colombia under the name of the ENGLISH BANK, with its main office in Bogota and branches at Medellin and Manizales.

COSTA RICA.

The National Chief Accountant reports the following NATIONAL EXPENDITURES during the months from January to November, 1918, inclusive: Total, 10,935,424 colones (colón = \$0.46 United States gold), distributed as follows: Legislation, 228,662; administration and police, 876,971; industry, 954,628; foreign relations, 194,388; justice, 359,641; religion, 18,700; charities, 154,343; public instruction, 921,844; war and police, 2,485,625; navy, 28,090; treasury, 1,582,574; and public debt, 3,129,957. The NATIONAL RECEIPTS in the same period totaled 7,263,489 colones, of which 1,021,150 were customhouse receipts, 2,232,100 were liquor taxes, and 1,115,607 fixed import tariffs.

The total CUSTOMHOUSE RECEIPTS during the first 11 months of 1918 were 1,021,150 colones, distributed as follows: San Jose customhouse, 386,117 colones; Limon, 282,781; Puntarenas, 303,098; and Sixaola, 49,154 colones.

By a law of national congress of February 17, the International Bank of Costa Rica is authorized to advance to the Government dur-

ing the present year the amount necessary to cover the increase over the BUDGET IN FORCE, decreed subsequent to the enactment of Budget Law No. 55 of August 8, 1918. The bank will procure the funds from the issue of 10,000,000 colones, authorized by a law of October 5, 1918, and by the loan of a sum not to exceed 2,000,000 colones, as stated in by-law (a) of article 12 of that law.

CUBA.

The Habana customhouse collected during March last \$2,837,003, the business on the last day of that month having amounted to \$193,916. The customs receipts in March of the previous year aggregated \$2,508,924. In February last the customs collections of the Habana customhouse were \$2,887,592.

The International BANK of Cuba proposes to establish branches in the most important commercial centers of the Republic, the first of these branches to be located at Cienfuegos, Province of Santa Clara. The profits of the Bank of the Island of Cuba during the year ended December 31, 1918, amounted to \$751,843.

The Guantanamo and Western RAILROAD Co. increased its net capital in 1918 by \$120,472. The gross receipts during that year were \$784,664, as compared with \$555,950 in 1917. The operating expenses in 1918 and 1917 amounted, respectively, to \$761,342 and \$526,220.

The board of directors of the United States and Cuban Allied Works Engineering Corporation has authorized an issue of \$1,500,000 in MORTGAGE BONDS to be sold in the United States.

GUATEMALA.

In 1918 there were 18,287,459 pesos expended in CHARITIES, of which 1,961,625 were employed in public sanitation and 16,325,839 in charities already in operation previously.

The TAX ON AGUARDIENTE produced the sum of 11,307,471 pesos in 1918 at the rate of 3 cents per bottle, but the regular tax diminished by 2,890,813 pesos, owing to decrease in the consumption of liquor.

Interest on the FOREIGN DEBT was paid to the amount of \$300,000 during the year 1918.

In 1918 the national treasury withdrew the sum of 309,972 pesos in BANK BILLS from circulation, which makes a total of 3,631,156 pesos withdrawn.

HONDURAS.

On January 24 the national congress approved a presidential decree of August 8, 1918, by which AMERICAN MONEY AND BANK NOTES are declared legal currency.

The subscribed capital of the ATLANTIDA BANK of La Ceiba, which until recently amounted to \$500,000 gold, with 50 per cent paid, has been increased to \$1,000,000 with \$500,000 paid, the reserve fund being proportionately increased. Besides the headquarters in La Ceiba and the branch offices at San Pedro Sula, Puerto Cortés, and Tegucigalpa, the bank is to establish another branch in Amapala and various agencies at other points.

MEXICO.

During the month of March, 1919, the PUBLIC REGISTRY OF PROPERTY AND COMMERCE indicated transactions to the value of 15,000,000 pesos, distributed as follows: Capital of organizations registered, 8,500,000 pesos; transfer of public or private property by written agreements, 2,500,000; mortgages, 2,000,000 (approximately); leases, 1,000,000; and transfer of property by inheritance, 1,500,000 pesos. The present report is particularly significant in consideration of the fact that in the corresponding month of 1918 only 8,000,000 pesos were involved.

NICARAGUA.

The National Bank of Nicaragua recently received 29 barrels of COINS of 5 centavos and $1\frac{1}{2}$ centavos, copper pieces. With this amount of regular fractional currency it is hoped to facilitate the exchange in sales of small values.

PARAGUAY.

The CUSTOMS receipts during the fourth quarter of 1918 amounted to 386,142 pesos, gold, and 5,031,939 pesos, currency, the customhouse of Asuncion being the recipient of 292,705 gold and 4,557,769 paper of the total sum.

During the quarter from October to December of 1918 the FOREIGN BANK DRAFTS AND LETTERS OF CREDIT drawn by all banks of the Republic totaled 6,597,693 pesos, gold, distributed as follows: Argentina, 6,355,859; Uruguay, 40,876; Spain, 24,439; United States, 21,659; France, 45,522; England, 56,822; and Italy, 52,516 pesos.

The director of the treasury has been authorized by the President to ISSUE BONDS to the value of 500,000 pesos, gold, in accordance with the dispositions of law No. 96 of September 25, 1914.

The net profits of the BANK OF SPAIN AND PARAGUAY in Asuncion amounted to 1,560,482 pesos, currency, in the year 1918.

PERU.

The total FISCAL RECEIPTS for the year 1918 were 1,675,767 pounds (Peruvian pound=\$4.8665 United States gold), or 91,065

pounds more than in 1917, in which year the total receipts exceeded those of the preceding by 77,278 pounds. Of the total for 1918 fully \$90,644 pounds were collected during the second semester.

The President has been authorized by Congress to obtain a LOAN of 300,000 pounds, gold, at 7 per cent annual interest and an accumulative annual amortization of 1 per cent to be used in the construction of the Jatunhuasi Railroad.

SALVADOR.

The national receipts through DIRECT IMPOSTS during the year 1918 totaled 260,441 pesos.

According to the latest report of the treasury for 1918 the PUBLIC DEBT is at present 29,550,619 pesos silver, an increase of 1,045,334 over that of 1917, caused by the considerable decrease in the federal receipts during the past year.

According to official statistics the value of the imports of COINED MONEY during the years 1904 to 1918, inclusive, is as follows: Coins in American gold, \$477,000; in silver of 900 milésimos, 6,811,000 pesos; fractional money of \$35 milésimos, 1,050,000 pesos; nickel coins, 7,508,000 one-cent pieces, 75,080 pesos; 3,700,000 three-cent pieces, 111,000 pesos; 6,000,000 five-cent pieces, 300,000 pesos. Adding the value of the silver and nickel coins imported, there is obtained a total of 8,347,080 pesos silver, of which the Government imported 2,195,040; the Occidental Bank, 2,362,000; the Salvadorean Bank, 1,815,000; and the Agricultural Commercial Bank, 1,975,000 pesos. The total number of nickel coins imported was 17,208,000.

URUGUAY.

The BANKS report the following statistics concerning the month of February: On hand, \$60,614,683; deposits on current account, \$52,536,425; time deposits, \$37,646,541; and advance payments, \$115,708,483. The gold on hand increased from 49,578,720 pesos in January to 50,170,467 in February.

VENEZUELA.

According to the report of the board of directors of the VENEZUELAN NAVIGATION CO., presented at the stockholders' meeting held early in March of the present year, the net receipts of the company in the second half of 1918 were 651,881 bolivars (bolivar, approximately \$0.21 United States currency), distributed as follows: Expended for dividends, 456,317; as securities fund, 130,376; as reserve fund, 32,594; and as guaranty fund, 32,594 bolivars.

INTERNATIONAL TREATIES

BOLIVIA—VENEZUELA.

On April 12, 1919, a GENERAL TREATY OF ARBITRATION was signed in Caracas between BOLIVIA and VENEZUELA by which the contracting parties agree to submit to arbitration questions of whatever nature that may arise between them, providing that by diplomatic channels a direct solution is not arrived at, and also excepting cases in which the jurisdiction of regular Bolivian or Venezuelan courts of justice is not called in question. The arbiters shall be selected from the secretaries of state of the American Republics, or, when necessary, from American lawyers. In case of disagreement as to the election of arbiters the contracting parties shall appeal to the permanent court of The Hague. In every case which arises an agreement shall be signed which sets forth the nature of the case, the constitution of the tribunal, and the rules of procedure to be followed. The convention will remain in force for a period of 10 years, and, if not denounced by either party, will be considered renewed for an equal period.

BRAZIL—COLOMBIA.

On March 14 last the Governments of Brazil and Colombia concluded an exchange of notes for the establishment of a DIPLOMATIC CORRESPONDENCE SERVICE between the departments of foreign relations of the two countries with legations accredited in Bogota and Rio de Janeiro, respectively. This service will be effected through the postal departments of the two countries by means of special mail pouches which are to be inviolable. The post office departments will fix the weight and volume of said pouches, which, until further notice, are to have a maximum weight of 15 kilos, and a maximum length, breadth, and height, respectively, of 50, 30, and 50 centimeters. The service became effective on the date of the exchange of the notes.

HAITI.

In its edition of March 26, 1919, the *Moniteur* published the official correspondence exchanged between the Haitian secretary of foreign relations and the French chargé d'affaires in Port au Prince on the occasion of the abrogation by the French Government of the COMMERCIAL CONVENTION agreed to by France and Haiti

on January 30, 1907. According to the note of the French representative, France has decided upon abrogating all the existing commercial treaties with the allied and neutral nations. It was agreed between the two countries that in order not to interrupt their commercial relations, the treaty which will expire on September 10, 1919, shall be extended on that date for three months and thereafter renewed for a same period as often as necessary until the new convention to be signed is put in force.



LEGISLATION

BOLIVIA.

By legislative enactment of January 20, 1919, a TAX ON MINING RECEIPTS was created at the rate of 8 per cent of the annual net profits. For the purposes of the tax, net receipts will be considered to include the profits obtained in the production and sale of minerals and metals after subtracting the expenditures. The tax is levied upon the mining industry and the amount will be determined by the customhouse papers at ports of exportation. The purchasers of mineral ore also will pay the same tax, but actual mining associations which pay 2 per cent on their dividends will be exempt.

BRAZIL.

The President of the Republic signed, under date of January 15 last, the law concerning ACCIDENTS TO WORKMEN. Under this law accidents are: 1. Those occurring while engaged in work, due to a sudden, violent, external, and involuntary cause, producing bodily or functional disorders, or partial or total loss, either permanently or temporarily, of ability to work. 2. Ailments contracted in the performance of work, when by their nature it is sufficient to cause them, resulting in the death of the workman or rendering him permanently or temporarily unfit for work. An accident occurring by reason of work or during the performance of same, obligates the employer to pay an indemnity to the workman or to his family, except in case of force majeure, negligence of the victim or of third parties. For the effects of the indemnity individuals of either sex, of legal age, or minors who are employed for account of another in construction, repair or demolition work of any kind, or in the conservation

of construction works, shall be considered workmen, as shall also those who are employed in transportation service, industrial establishments and any undertakings employing inanimate motors. The indemnity shall be calculated in accordance with the seriousness of the results of the accident. In case of death the indemnity shall consist of a sum equal to three years' salary of the victim, which shall be payable at one time to his heirs, plus 100,000 reis for expenses of burial; in case of total and permanent incapacity a sum equal to three years' salary shall be paid; in case of total but temporary incapacity one-half of the difference between the salary which was earned and that which would be earned because of the decrease of his capacity for work shall be paid. In all other cases the employer is obligated to render medical and pharmaceutical assistance, and hospital service when necessary. This law, which was promulgated by an executive decree of March 12 last, is published in the Official Gazette of Brazil of January 25, 1919, and the rules and regulations in that of March 22 last.

CHILE.

On December 12, 1918, the LAW OF DOMICILE referring to the admission and expulsion of foreigners, and which, in substance, contains the following prohibitions, was promulgated: Entrance of foreigners who have been sentenced or who are being prosecuted for offenses classified in Chile as crimes; foreigners who do not have or can not exercise a profession or calling; foreigners suffering from contagious diseases; foreigners who practice or teach the overthrow by violence of the established political order; foreigners who advocate doctrines incompatible with national unity, or those who incite manifestations contrary to the established order, or who engage in acts contrary to good custom and public order. The governors of the provinces are expressly authorized to expel from the country any foreigners comprised in the foregoing clauses through decrees issued in accordance with this law. Any foreigner whose expulsion has been decreed may judically appeal, either personally or through a representative, to the supreme court within five days after the publication of the decree of expulsion. The supreme court, acting as a jury, will decide the appeal within 10 days after its presentation. The administrative authority may compel foreigners to register in special records and to obtain identification cards.

COSTA RICA.

A presidential decree of February 12, 1919, amplifies law No. 44, of November 19, 1918, which provides that, in conformity with articles 117 of the political constitution and 9 of the temporary provisions attached to the former, the electorate of every province shall elect

the following number of acting and alternate SENATORS AND DEPUTIES for the coming constitutional period: Province of San Jose, 4 acting senators and 2 alternates, 9 acting and 3 alternate deputies; Province of Alajuela, 3 senators and 1 alternate, 7 deputies and 3 alternates; Province of Cartago, 2 senators and 1 alternate, 5 deputies and 2 alternates; Province of Heredia, 2 senators and 1 alternate, 3 deputies and 1 alternate; Province of Guanacaste, 1 senator and 1 alternate, 3 deputies and 1 alternate; Province of Puntarenas, 1 senator and 1 alternate, 1 deputy and 1 alternate; and Province of Limon, 1 senator and 1 alternate, 1 deputy and 1 alternate. The law also fixes the number of acting and alternate aldermen that each canton is to elect for the same period and authorizes each canton to appoint also a subtreasurer and his assistant; every district also is to elect an attorney general and alternate.

HAITI.

A recent decree published in the official newspaper appropriates a further sum of \$2,000 for the completion of the ROAD being constructed between Thomazeau, Mirebalais, and Hinche.

A law promulgated on February 26, 1919, establishes new rules governing the granting of mining rights and the working of the MINES and quarries situated within the territory of the Republic.

According to an act which was published in the *Moniteur* on March 19, 1919, the number of PUBLIC NOTARIES practicing in the Republic is limited to 32; this act establishes also a scale of notarial fees.

NICARAGUA.

The President has been authorized to organize a board of four members, whose duties shall consist of formulating projects for the necessary BETTERMENT OF THE BOOKKEEPING and fiscalization system in force, to be presented for the approval of the legislature at its next assembly.

PERU.

On December 26, 1918, the LABORERS AND PUBLIC EMPLOYEES' HOUSING LAW, passed on December 17, went into effect. The President, in conformity with its terms, will sell to the savings bank of Lima or to securities companies of that city the land upon which a maximum of 100 houses are to be built for workmen and employees who have served the State for over five years and whose monthly salary is not over 15 pounds (Peruvian pound = \$4.8665 United States gold). The houses will be sold on terms of 10 and 20 years, 5 per cent of the price in cash and the remainder on monthly installments. The construction company may issue bonds

guaranteed by the funds obtained from the rental of the houses and for a sum not to exceed 90 per cent of the cost of the land and houses.

On December 26 the OBLIGATORY REST LAW of December 9 was approved. According to the law, Sundays, civil holidays, and the first days of elections are holidays, on which work in factories, shops, warehouses, mines, building, and agricultural work in which mechanical power is employed, is prohibited, as well as meetings or decisions of the President, councils, charities societies, and official instruction. Exception is made of work in stores and warehouses when permission is granted by the council, sales customarily held in certain towns on festivals, works of public health, irrigation, and hospital services. In business and offices in which work on holidays is necessitated all workmen and employees shall have 24 hours of rest at some time during the week.

URUGUAY.

Congress has passed a law concerning domestic and foreign CORPORATIONS, according to which such associations, in exercising commercial prerogatives in the country, shall remain subject to the inspection and auditing of the general bank and corporations inspector, being obliged to publish their balances quarterly in the Official Daily after inspection by the inspector mentioned, and to present a detailed balance and the dividend budget at the close of every year.



GENERAL NOTES

ARGENTINE REPUBLIC.

The director of the bureau of statistics has compiled some interesting data concerning IMMIGRATION during the war. The total number of immigrants arriving in the country from 1914 to the close of 1918 was 272,568. During the same period the number of emigrants totaled 482,321, which represents a loss in population of 209,753. Adding the estimated natural increase in population since 1914, the same authority states that the POPULATION of the Argentine Republic at the close of 1918 was 8,411,000.

On March 17 last the Argentine cruiser *Pucyrredon*, used a second time as a SCHOOLSHIP in place of the steamship *Sarmiento*, sailed from Buenos Aires on its annual voyage of instruction with students from the naval school.

On March 21 last the President of the Republic officially received Amado Nervo, the new MINISTER OF MEXICO, to whom the literary men of Buenos Aires gave a cordial and enthusiastic welcome.

BOLIVIA.

On March 21 the President of the Republic made the following CABINET APPOINTMENTS: For minister of foreign relations Señor Darío Gutiérrez; minister of public instruction and agriculture, Señor Luis Zalles C; and minister of the treasury, Señor José Luis Tejada S.

The University of San Xavier of Charcas has conferred the DEGREE OF DOCTOR of laws, jurisprudence, and social sciences upon Dr. Baltasar Brum, newly elected President of the Republic of Uruguay. The presentation will be made by the minister of Bolivia in Montevideo.

AN ANTIALCOHOLIC LEAGUE has been organized by an exclusive set of young ladies of the city of Santa Cruz de la Sierra.

BRAZIL.

The Brazilian Government has ordered the mint to print a new series of POSTAGE STAMPS to be used for official correspondence. These stamps will bear an engraving of President Wenceslao Braz instead of that of Marshal Hermes. They are to be issued in the following denominations and colors: 10 reis, sepia; 20 reis, violet; 50 reis, green; 100 reis, carmine; 200 reis, blue; 500 reis, orange; 600 reis, chestnut; 1,000 reis, gray; 200 reis, purple; 5,000 reis, emerald green; and 10,000 reis, vermilion.

Dr. Gabriél de Villanova Machado has made an important discovery in the manufacture of ELECTRIC STORAGE BATTERIES used in telegraphy. These batteries are said to be equal to those manufactured in England and Germany, and have taken their place in Brazil in the telegraph service of the country.

CHILE.

Iquique has been selected for the holding of the 9th CHILEAN SCIENTIFIC CONGRESS in September, 1919. The organizing committee has designated the President of the Republic and the minister of public instruction as patrons of the congress.

At the suggestion of José Toribio Medina the Chilean Academy of Languages, representing the Royal Spanish Academy, has petitioned the Government to adopt the CASTILLIAN ORTHOGRAPHY established by the academy and used by other Spanish-speaking countries.

A MONUMENT to the Chilean patriot O'Higgins, which is considered by many to be the most beautiful work of its kind in the Republic, will soon be unveiled in the city of Chillan. The monu-

ment was conceived and cast by Señor Negri, a noted artist. The Chilean hero is represented in the act of removing the sash from his breast as a sign of abdication of the supreme command.

The President of the Republic officially received Fernando Cuen, MINISTER OF MEXICO, on March 21 last.

At a meeting of the Chiloe Maritime League, on March 24 last, a resolution was adopted providing for the construction in Valparaiso of a HOUSE FOR SAILORS.

COLOMBIA.

The BOARD OF RELIEF, which was organized in Bogota during the influenza epidemic, has been converted into a permanent public benevolent association. The new organization will give special attention to matters of public hygiene and especially as concerns the habitations of workmen. The association proposes to construct four public baths in different parts of the national capital, equipped with swimming pools, restaurants, rest rooms, etc.

CUBA.

The mayor's committee of welcome of New York, to which the consul general and vice consul of Cuba belong, has obtained permission for the city council to add the CUBAN FLAG to the flags of the five principal nations which took part in the European war. These flags are used in celebrating the home-coming of soldiers and other patriotic functions in the city of New York. Cuba was the first Latin American country to declare war on Germany.

The municipality of Habana has made a contract with the sculptor, Ramon Mateo Montesinos, for the construction and erection in one of the most central parts of the national capital of a MONUMENT in honor of the poet, Juan Clemente Zenea.

The director of a moving-picture enterprise in the United States has brought the necessary apparatus and 15,000 feet of blank film to Cuba for the purpose of taking views of SUGAR-CANE FIELDS and sugar factories to be shown in the United States.

The congress of Cuba has ordered the construction of a PUBLIC HIGHWAY out of granite blocks between Luyané and Guanabacoa. The sum of \$200,000 has been appropriated for the work.

The executive power has declared April 18, 1919, the first centenary of the birth of the Liberator Carlos Manuel de Cespedes, a NATIONAL HOLIDAY, and has ordered that one of the principal streets of each of the cities, towns, and villages of the Republic be given this name; that the bureau of communications order engraved and printed in a dark color a 5-cent postage stamp with an engraving of Cespedes thereon in a quantity sufficient for a five months' supply; that the city of Habana erect a monument to his memory, the design to be chosen by an international competition of

artists; that 2,000 bronze or nickel medals, properly inscribed, be struck in commemoration of the centenary of his birth, and that they be distributed to the principal museums, libraries, and academies of the world; and that a collection be made of the articles, poems, theatrical works, proclamations, letters, and other writings of the great patriot to be printed in book form.

On April 19 the city council of Habana changed the name of Reina Calzada to SIMON BOLIVAR CALZADA in honor of the great liberator.

Habana is to have a new five-story OFFICE BUILDING to be erected on Italy Avenue at a cost of about \$1,500,000.

The Pan American WIRELESS Telegraph & Telephone Co. has been granted a concession for the establishment of an international wireless telegraph service between Cuba, the United States, and other countries, the company agreeing to erect a number of receiving and transmitting stations in the Republic.

Angel Solano has been appointed CONSUL of Cuba at Tampa, Fla.

DOMINICAN REPUBLIC.

The military government of the Republic has created a committee, to be known as the DOMINICAN TARIFF COMMISSION, whose duties shall be the revision of the customs tariffs subject to the approval of the military government. The commission is composed of the following members: President, Señor J. H. Edwards, deputy receiver general; Sres. Alfredo Ricart, president of the chamber of commerce of Santo Domingo; Julio Senior, special customhouse inspector; R. Albuquerque, auditor of the customhouse of Santo Domingo; R. H. Worfeld, of Washington, D. C.; and secretary, Señor Luis E. Lavandier, official translator of the general customhouse receivership.

The chief of sanitation has been authorized to permit the practice of MEDICINE, DENTAL SURGERY, or pharmacy by any person who holds or has at some time held a diploma in the professions.

The military government has declared the telephone industry throughout the Republic a public utility, and has appropriated through the secretaryship of industry and communications the sum of \$200,000, gold, for the installation of a TELEPHONE SYSTEM in the city of Santo Domingo and a telephone and telegraph line between that city and Cibao.

ECUADOR.

The board of directors of the Medical and Surgical Bulletin are holding a CONTEST of original theses on medical, surgical, and allied scientific subjects, to which all professional men, including foreigners resident in the country and all university students in the

Republic are eligible, the prizes being conferred May 24, 1919, the twenty-third anniversary of the date of the founding of the school of medicine.

Señor Don Carlos M. Tobar y Borgoño has resigned as minister of foreign relations to accept the office of RECTOR OF THE CENTRAL UNIVERSITY for the period 1919-1923, to which he was elected at the latest session of the legislature.

Late in March a campaign for the SANITATION OF THE CITY OF DURAN was aggressively begun under the direction of Dr. Connor, of the Rockefeller Institute in the United States. The principal object is the extermination of yellow fever.

During the present month of May the third NATIONAL AGRICULTURAL AND INDUSTRIAL EXPOSITION is being held in Quito under the auspices of the National Agricultural Association.

Dr. Manuel María Pólit, archbishop of Quito, and Dr. Carlos Tobar y Borgoño, rector of the Central University, were unanimously elected to fill the vacancies in the NATIONAL PATRIOTIC COUNCIL caused by the deaths of Señor Federico González Suárez, former archbishop of Quito, and Dr. Benigno Cueva.

HONDURAS.

The press of Tegucigalpa announces that the COLUMBUS MONUMENT, the erection of which was authorized by a governmental decree of October 12, 1916, is nearly completed. The statue stands in the Plaza de Armas of the capital city. The official date set for the unveiling of the monument is October 12 of the present year.

A magazine called THE HONDURAN TEACHER (Magistero Hondureño) is being published in Tegucigalpa as the official organ of the teachers' association of which Prof. Don Juan J. Castro was recently elected president.

The first volume of a GEOGRAPHICAL, HISTORICAL, AND ETYMOLOGICAL DICTIONARY OF HONDURAS, by Señor Pedro Rivas, has just been published in the capital. The work contains interesting geographical data relative to the departments, cities, villages, and settlements of the country, as well as of the rivers, valleys, islands, and other topographical features, together with historical and etymological explanations.

Dr. Policarpo Bonilla, the distinguished statesman, has been appointed HONDURAN DELEGATE to the Peace Conference in session at Paris, and envoy extraordinary and minister plenipotentiary to the French Republic.

Through the ministry of foreign relations the following CONSULS GENERAL have been appointed: Señores Timoteo Miralda, Leopoldo Córdova, Jr., and Rafael H. Valle, to New York, New Orleans, and Mobile, respectively.

MEXICO.

According to statistics of the department of industry, the POPULATION OF MEXICO CITY, which in 1910 was 780,000, now totals 1,080,000.

Señor Don Clemente Austín has been officially received in Mexico City as CONSUL GENERAL OF URUGUAY to the Mexican Government.

In 1920 a NATIONAL EXPOSITION OF MEXICAN PRODUCTS will be held in Vera Cruz under the auspices of the national chamber of commerce of that city, to which all similar organizations and industrial companies, as well as foreigners making their homes in the country, will be invited.

On March 26, 1919, the recently elected GOVERNOR OF THE FEDERAL DISTRICT, Señor Lic. Benito Flores, took the oath of office before the President of the Republic.

The second volume of the TREATISES ON ART IN MEXICO (Monografías Mexicanas de Arte), edited by the general inspectorate of monuments of Mexico, has just been published. It contains 84 illustrations of the most interesting buildings of the colonial period existing in the capital.

NICARAGUA.

The President has been authorized by congress to sell the RAILROAD MATERIALS belonging to the Government at public auction after due formalities.

The President of the Republic has agreed to create a LEGATION in Colombia as a recognition of the many courtesies that country has always extended to Nicaragua.

PANAMA.

By presidential decree of March 31, the various warehouses known as the "Government depository," "Telegraph depository," and "School supplies warehouse" shall be consolidated into one storehouse, called the "GENERAL GOVERNMENT SUPPLY HOUSE," which shall be in charge of an employee whose title shall be general supply officer.

The Panamanian Government has received Señor Vicente Rendón Quijano as MEXICAN CONSUL in the city of Panama.

In conformity with a presidential decree of March 31, the offices and personnel of the FISCAL INSPECTOR were abolished May 1, 1919, including the court of accounts and the judgment court, the duties formerly performed by these offices passing to the fiscal agent, who at that date was invested with the authority and privileges granted the former officials under law 30 of 1918 and by various laws and decrees since passed.

According to the report recently submitted by Dr. Frederick A. Miller, delegated by the Rockefeller Institute of the United States

to superintend experimentation with and treatment of hookworm disease in Panama, 86,525 persons have been examined from the time work was begun in the country until December 31, of whom 68,768 were treated for the disease.

PARAGUAY.

The ministry of war has recently published a HISTORY OF THE PARAGUAYAN WAR, with hitherto unpublished documents which form a part of the memoranda of Señor Gregorio Benítez, the historian and diplomatist, who was minister of Paraguay to Paris during that period.

A presidential decree of February 13 establishes TEMPERANCE ZONES and laws for their regulation. By this decree the manufacture and sale of alcoholic drinks of all kinds within certain sections is prohibited, and it may not be brought into municipalities where encampments are located. The president may also fix such zones about industrial establishments where at least 100 workmen are permanently employed upon application from interested parties.

The National Educational Council has adopted the MAP AND ATLAS OF PARAGUAY recently published by Señor Federico Gásperi in Asuncion as an official textbook in all the schools of the Republic. The map gives colored plates of the various subdivisions of the country, the roads, and important rivers; indicates the pastoral, agricultural, and mining districts; and describes the character of the islands in the Paraguay and Parana Rivers.

The museum of the Asuncion Botanical Garden has just acquired the SKULL OF A HIPPOPOTAMUS of prehistoric age, measuring 70 centimeters in length and weighing 75 kilograms. It was discovered in the Chaco region on the bank of the Pilcomayo River.

Dr. Plácido Sánchez has been made envoy extraordinary and MINISTER PLENIPOTENTIARY OF BOLÍVIA to the Government of Paraguay.

PERU.

Dr. Javier Prado y Ugarteche has been unanimously reelected RECTOR OF THE GREATER UNIVERSITY of San Marcos in Lima.

The PERUVIAN INTERNATIONAL INFORMATION BUREAU has recently been organized under the ministry of foreign relations, the object of which is the establishment of a permanent political, economic, and financial informational system. The founder and director is Dr. Aníbal Maúrtua.

Dr. Isaac Alzamora has been appointed MINISTER PLENIPOTENTIARY of Peru to the Government of Great Britain.

The President has named Señores F. Panizo and A. Arbese Vegas MINISTER OF JUSTICE and MINISTER OF INDUSTRY, respectively, to take the places of Señores Angel Gustavo Cornejo and Manuel A. Vinelli, resigned.

Volume XIX of the REPORT OF THE PUBLIC TREASURY OF PERU has been published. The work was prepared by Señor J. M. Rodríguez, and contains important information concerning the history and fiscal legislation of the Republic.

SALVADOR.

Dr. Manuel Castró Ramírez was appointed CONSULTING COUNSEL OF THE NATIONAL GOVERNMENT by a recent presidential decree.

The new MINISTER OF HONDURAS TO SALVADOR, Dr. Miguel A. Fortín, was received in public audience early in March.

A NEW WEEKLY PAPER called *La Tribuna* has appeared in San Salvador under the direction of Señor Manuel Ugarte, jr. The periodical is the official organ of a group of Honduran citizens resident in Salvador.

The superior health council has initiated an active ANTIALCOHOLIC CRUSADE throughout the Republic, having appealed to the President for legislation which will decrease the pernicious results of the increasing consumption of alcohol in the country.

At the session of the national legislative assembly held March 12, 1919, the ELECTION OF MAGISTRATES AND ALTERNATES to the supreme court of justice and the legislatures of the central, western, and eastern districts was held. The headquarters of the legislatures are at Cojutepeque, Santa Ana, and San Miguel, respectively. Dr. Francisco Martínez Suárez was at the same time elected President of the Supreme Court.

The newly elected president of the Republic, Señor Don Jorge Meléndez, has organized the CABINET as follows: Minister of foreign relations, public instruction, justice, and charities, Dr. Juan Francisco Paredes; assistant secretary of foreign relations and justice, Dr. Miguel Gallegos; assistant secretary of public instruction and charities, Dr. Hermógenes Alvarado, jr.; minister of state, industry, and agriculture, Dr. Miguel Tomás Molina; assistant secretary of state, industry, and agriculture, Dr. Arturo Argüello Loucel; minister of the treasury and public credit, Don José Esperanza Suay; assistant secretary of the treasury and public credit, Dr. Héctor David Castro; minister of war and marine, Dr. Pío Romero Bosque; and assistant secretary of war and marine, Dr. Francisco Tomás Mirón.

URUGUAY.

During the year 1918 the following VITAL STATISTICS were reported in Montevideo: Births, 9,794; marriages, 2,596; deaths, 6,988.

On March 4 the National Administrative Council of the Republic of Uruguay nominated the following new CABINET MINISTERS: Dr. Ricardo Vecino, minister of the treasury; Dr. Rodolfo Mezzera,

minister of public instruction; Arq. Humberto Pitamiglio, minister of public works; and Dr. Luis Caviglia, minister of industries.

Construction of the projected HOSPITAL will shortly be begun in the city of Durazno with a capacity for 100 beds and separate wards for medical, surgical, and special treatment cases, all with modern appliances.

The National Administrative Council has decided upon the purchase of RODÓ'S WORKS at 40,000 pesos, the price decided upon by experts who appraised the valuable collection.

The third SESSION OF THE RURAL FEDERATION was held late in March in Florida, which, like the previous session in Paysandú in 1918, was very satisfactory in results.

The minister of foreign relations has accepted the plans presented by the Uruguayan sculptor, Señor Pablo Mañé, for the MONUMENT to be erected in honor of Rio Branco as a symbol of international justice, and a contract has been signed with Señor Mañé for its execution.

VENEZUELA.

The president of the State in the name of the government of Carabobo has ordered the preparation of a book describing the origin and colonial growth of the State, its share in the war of independence, and its development up to the present time, as a part of the celebration of the first CENTENARY OF THE BATTLE OF CARABOBO, which took place June 24, 1821, and in commemoration of the liberators.

A CHILDREN'S HOSPITAL, built at the expense of residents of the city, was opened in Caracas early in March.

A recent presidential decree establishes PARCELS POST service throughout the country, in conformity with the authorization of article 2 of the postal law.

On March 29, 1919, the city of Coro celebrated the first CENTENARY of the birth of its native son, Don José Heriberto García de Quevedo, the poet, with appropriate festivities.

The State of Apure celebrated the first CENTENARY OF THE BATTLE OF LAS QUESERAS DEL MEDIO, which took place April 2, 1819, with the opening of a chemical bacteriological laboratory given by the Apure government to the Charities Hospital of San Fernando; the opening of Vuelvan Caras Avenue, constructed by the government in the northwestern part of the city; and by the laying of the cornerstone of the arch of triumph, which will commemorate the series of historic events which culminated in the battle mentioned.

The book, "BOLIVAR STATE" ("Estado Bolívar"), edited by Señor Víctor Vicente Maldonado by the order of the president of the State, has been put into circulation. It contains interesting descriptive data, information, and documents relative to the industrial development of this rich section of Venezuela.

BOOK NOTES

[Publications added to the Columbus Memorial Library during April, 1919.]

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- Contribución a la geología de la región comprendida entre el Río Negro y Arroya Valcheta. Por el Doctor Ricardo Wichmann. Con una descripción petrográfica de las rocas eruptivas y metamórficas. Por el Doctor Franco Pastore. Buenos Aires, Talleres gráf. del Ministerio de Agricultura de la Nación, 1918. pls. map. 45 p. 4°. (Anales del Min. de Agricultura, Tomo 13, No. 4.)
- El cultivo del espárrago. Manual práctico. Por Pedro A. Bovet. La Plata, Taller de Impresiones Oficiales, 1917. illus. 52 p. 8°.
- Enfermedades más comunes de los frutales y manera de combatirlas. Por Pedro A. Bovet. La Plata, Taller de Impresiones Oficiales, 1917. illus. 104 p. 8°.
- Estudios geológicos e hidrogeológicos en la región comprendida entre boca del Río Negro, San Antonio y Choele-Choel. Por el Doctor Ricardo Wichmann. Buenos Aires, Talleres gráf. del Ministerio de Agricultura de la Nación, 1918. pls. 44 p. 4°. (Anales del Min. de Agricultura, Tomo 13, No. 3.)
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CHILE.

- "La cuestión del Pacífico." Una revancha con sangre ajena. Por Joaquín Walker Martínez. Santiago, Imp. Chile, 1919. 112 p. 8°.
- Statistical abstract of the Republic of Chile. 1917. Santiago de Chile, Imprenta Universo, 1918. 146 p. 8°. (Publication of the Oficina Central de Estadística.)
- Same. In Spanish. 169 p. 8°.

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- La caída del gobierno constitucional en Costa Rica. El golfo de estado del 27 de enero de 1917. [Por J. Rafael Orenuno.] New York, De Laisne & Carranza, 1919. illus. 79 p. 8°.

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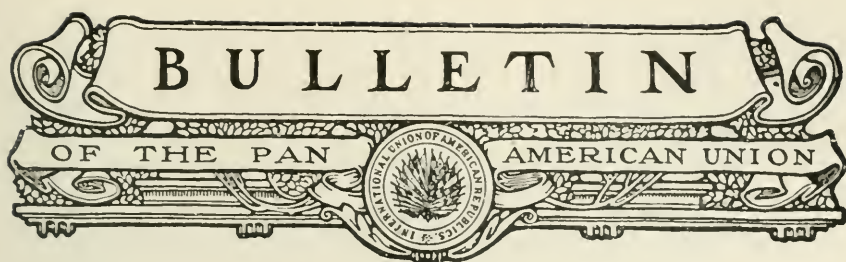




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SENIOR DR. EPITACIO PESSOA, PRESIDENT ELECT OF BRAZIL.

Dr. Epitacio da Silva Pessoa, who by a majority vote of his countrymen on April 13, 1919, was elected President of Brazil for the remainder of the constitutional period of 1918-1922, is a native of the State of Parahyba del Norte and is a prominent figure in his country, in spite of the fact that he is among the youngest Brazilians in public life. Upon finishing studies in the College of Law of Recife he practiced law in Pernambuco before representing his native State in the Federal Congress, after which period his political career was marked by increasing prominence and frequent election to administrative offices. A deputy to several legislatures, President-elect Pessoa took active interest in everything relative to public instruction and the treasury, and during the Campos Salles administration he was minister of justice and the interior. Appointed later justice of the supreme court, he continued to evince evidence of his unusual ability as juriconsult. When retired from the supreme court during the administration of Marshal Hermes da Fonseca, he returned to politics and was elected senator for the State of Parahyba del Norte, and took an active part in the discussion of the civil code now in force in the Republic and was chairman of the committees on justice and legislation in the Chamber of Representatives. In 1910 he received from the Brazilian Government an appointment to draft a code of international law, which was submitted to the Conference of American Juriconsults which met in Rio de Janeiro in 1912, and met with the hearty approval of the distinguished body. At the time of his election to the presidency he was in Paris acting as chief of the Brazilian delegation to the Peace Conference.



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COASTAL TOWNS OF BRAZIL¹ " " " "

THE EQUATORIAL COAST.

SOON after we left the Amazon the aspect of the Brazilian coast was entirely changed. The thick vegetation which was a delight to the eyes was changed into monotonous banks of sands. We were following the equatorial coast.

São Luiz de Maranhão was the first town at which we called on our way down the coast. It is the capital of the State of Maranhão and shelters to-day over 50,000 people.

São Luiz looks proudly over the beautiful bay. From the deck of our boat we had a splendid panoramic view of the city, showing a compact mass of houses of variegated colors standing out in bold relief in the bright sunlight, with green spots here and there, formed by the trees of several delightful plazas that beautify the place. The Praça Gonçalves Dias is in view, and the high and imposing monument of the poet surrounded by beautiful palm trees brings unconsciously to our mind his verses of the "Chanson of the Exile."

We impatiently awaited the time of landing to pay a visit to this heroic town, which played such an important part in the colonial days, and which has given so many illustrious scholars to Brazil that it has been given the title of the "Brazilian Athens."

The city, with its narrow and steep streets and alleys, maintains the aspect of the old town of the north of Portugal, although the town was founded by the French when they dreamed of establishing an "Equatorial France" in this region during the sixteenth century.

São Luiz has also several new and beautiful avenues and streets, such as the Avenida Maranhense; several charming public parks,

¹ By Dr. J. de Siqueira Coutinho, of Pan American Union staff.



[Photo by Pedro Contente, Belém.

PANORAMIC VIEW OF SÃO LUIZ DO MARANHÃO, STATE OF MARANHÃO.



VIEW OF THE CITY OF NATAL, STATE OF RIO GRANDE DO NORTE.



PARTIAL VIEW OF THE CITY OF FORTALEZA, STATE OF CEARÁ.



Photo by Martins, Recife, Pernambuco.

ONE OF THE NEW STREETS OF RECIFE.

The picture shows one of the new streets of the commercial section of the city of Recife. At the end of the street stands the monument of Baron do Rio Branco.



Photo by Martins, Recife, Pernambuco.

MONUMENT OF JOAQUIM NABUCO, RECIFE.

This monument of Joaquim Nabuco stands in the plaza of the same name on the island of Santo Antonio.

such as those of João Lisboa, with the monument of that great writer, the Square Gonçalves Dias; and those of Odorico Mendes and Benedicto Leite. The ornamental tree used here on a large scale is the wild fig tree, while in Belem (Para) it was the mango tree.

During a couple of centuries in early colonial times São Luiz was the capital of northern Brazil, and witnessed some rather heated discussions anent the treatment of the natives. Here took place the great struggle between the colonists on one side, who wished to enslave the Indians, and on the other side, the Jesuits, who stood nobly in defense of the native races. In the grand old cathedral the greatest preacher the Portuguese language ever had, the vigorous Father Antonio Vieira, delivered some of his most brilliant sermons. The traditions of this cathedral are so impressive that it stands as a sacred place to those who cherish Portuguese oratory.

Although our stay was very short in São Luiz, when we were ready to leave it seemed as if some invisible bond held us to this historic city. Could it have been the call of some ancestral voice?

From the Brazilian Athens we went to one of the most thrilling sections of Brazil—to Fortaleza, the capital of the State of Ceará, the land of poetry, of music, of terrible droughts, of beautiful women, and of marvelous laces; the land, also, of the famous pioneers of the Amazon world, the only pioneers who have succeeded in overcoming the tremendous forces of nature of that extraordinary land. Living under the terrible stress of periodical droughts, the Cearenses who survive are able to adapt themselves to any kind of climate and conditions. Reinforced by a strong character and a noble spirit, molded by strenuous and bizarre experiences, they are able to express æsthetically their emotions in a very impressive and poetic way. In physiognomic characteristics most of the Cearenses of to-day resemble very much the Portuguese of older times. They are the descendants of the handful of incomparable colonists of that race who had to overcome the numberless difficulties resulting from the diplomatic quarrels in Europe and armed clashes in this New World, and who finally succeeded in the occupation of nearly a half of the South American Continent, leaving this great domain as a sacred heritage to its citizens of to-day.

The pleasant and hospitable city of Fortaleza is situated on the banks of a wide and open bay without any protection. The landing is made by means of lighters and small boats with some difficulty, as the sea is generally rough. The town is surrounded by a sandy section of the country and looks like a real oasis. It was founded in 1649. Its streets are wide and very well kept, the most attractive being the Sete de Setembro, Marquez do Herval, and Caio Prado. Among its beautiful parks and promenades may be mentioned the Parque da Liberdade and Passeio Beira-Mar. The buildings are



Courtesy of The Americas, New York.

ONE OF THE NEW AVENUES OF BAHIA

new and many are imposing. The town has a very good market place, an excellent car service, and electric lights. It is a modern city with 50,000 inhabitants, full of life and with a generous old-fashioned spirit of hospitality. Ceará has produced many illustrious citizens of the great Republic, and its capital ranks as one of the intellectual and artistic centers of the country.

Our next stop was Natal, the capital of the State of Rio Grande do Norte. Soon after we left the bay of Fortaleza we met a number of small boats with triangular sails. They were the *jangadas* of the Cearense fishermen. The coast is sandy, and when we round San Roque Cape the coast changes its direction, running practically north and south. This section we will call

THE MERIDIAN COAST.

The first port of this coast is Natal. The most important product of this section of the country at the present time is cotton or "white gold," as it is called, in contrast to rubber, known as "black gold," which in past years filled with gold the coffers of the people of the Amazon States, and to coffee, known as "red gold," the staple commodity of São Paulo, and to sugar, which is sometimes called "sweet gold." Sugar is also a staple commodity of the meridian coast. The States of Pernambuco and Rio de Janeiro are the greatest exporters of this product.

At the mouth of the river, which forms the harbor of Natal, stands the old fortress of Reis Magos.

The general aspect of Natal is most picturesque. The city is divided into two sections, the lower section being on the riverside. The houses of the upper section, emerging from a mass of tropical vegetation, are a delight to the traveler. In the lower part of the city are the largest stores and business houses generally. Here the visitor will find one of the most beautiful parks of the town. It is bordered on two sides by coffeehouses and stores, and on the other two sides by the beautiful buildings, such as the Carlos Gomes Theater, Escola Ricardo Severo, and the imposing edifice of the "Escola Domestica," a school for the education of young ladies in housework, and which is said to be the best in Brazil.

No one that goes to Natal should fail to pay a visit to the suburbs, especially to Petropolis, easily reached by the car line. At the top of a hill facing the ocean stands an excellent hospital. From the terrace one may enjoy a splendid view of the ocean.

In the public garden, at one of its corners, stands the monument of the Brazilian aeronaut, August Severo, born in Rio Grande, who was lost in his dirigible, "Pax." Rio Grande do Norte was also the birthplace of Nisia Floresta, sometimes called the Brazilian "Madame Seigné."



Courtesy of The American, New York.

ONE OF THE BUSIEST SQUARES OF BAHIA.

The building at the left is the municipal building and the one on the right is the Government Palace.

We left Natal for Cabedello, a protected harbor in the State of Parahiba, where our steamer docked by the side of some Brazilian cruisers. Cabedello was founded in 1555 and is a small town with perhaps some 200 houses, partly hidden among tall coconut trees. The town is connected by rail with Parahiba, capital of the State, which is in turn connected with Natal, Pernambuco, and Alagoas.

Dr. Epitacio Pessoa, recently elected to the presidency of the Republic upon the death of Dr. Rodrigues Alves, is a native of Parahiba. He held for some time a professorship in the Federal law school at Recife, and later served as a member both in the senate and house of representatives; then as minister of the Interior and Justice; also as a judge of the supreme court; and is now president of the Brazilian delegation to the Peace Conference at Versailles.

Missing our train, we took the ocean route for the city known as Pernambuco or Recife, rich in historical traditions and noted for its picturesque waterways, which have won for it the name of the "Venice of the Americas."

PERNAMBUCO.

To me the very tranquillity of this spot of Brazilian soil offers a special attraction as no other in the world, not merely because one of the members of my family, a diplomat of the seventeenth century, at the time ambassador to the Netherlands, had to hazard everything to defend the rights of Portugal to this corner of the American continent, taking advantage of all the diplomatic practices of the time, but more particularly because the brave inhabitants of this section, without distinction of race or origin, launched upon a deadly struggle, in which for 30 years they stood firm before the Dutch invasion, not permitting even the liberal and progressive flag of the Netherlands to fly above the heroic colors of Portugal. That feeling of nationality shown so intensely by the Pernambucans and the Bahians of the seventeenth century, although they were not yet an homogeneous body, has not altered during the historical evolution of Brazil.

It was therefore with most reverent sentiments that I descried, early in the morning, the town of Olinda, the picturesque advance sentinel of Recife, as we were cruising southward. In the fresh atmosphere of early morning, when the sky is clear and intensely blue and the sun brilliant, Recife is truly beautiful. At such a time I first beheld it, with its buildings bordering the avenues and squares facing the harbor and appearing to me as if a continuation of the deck of the steamer. The Pernambuco which lay before my eyes was not the Pernambuco of the old pictures we know. It is to-day



GOVERNMENT PALACE IN THE CITY OF MACEIO, STATE OF ALAGOAS.



PANORAMIC VIEW OF VICTORIA, STATE OF ESPIRITO SANTO.

a city with good streets and buildings recently erected, which give the most attractive and modern aspect to the town.

Fronting the harbor there is a large square, upon which one lands, and in the center of which stands a monument to the Baron de Rio Branco, one of the greatest men the hemisphere has produced, in the attitude of extending a welcome to the visitor who for the first time reaches Brazilian soil. And when the traveler leaves the second island, Santo Antonio, for the mainland, another monument attracts his attention—the statue of Joaquim Nabuco in a familiar posture, addressing an audience. The life of Nabuco was devoted to the same ideals that actuated Rio Branco, and it is interesting and a source of satisfaction to note that the two who so zealously defended the rights of nations and the rights of humanity, were honored in bronze by the city, and that not even death separated the two whose lives were passed in absolute communion of ideals.

The city of Recife, which is built upon two islands and a strip of the mainland, possesses an excellent artificial harbor, with all facilities for the handling of commodities at the docks.

Its population today is over 250,000 inhabitants; and, besides places of unrivaled beauty and of historical interest, there are many churches, public buildings, and every feature required by a modern city. The Federal law school has a building second to none, according to visiting foreign statesmen considered authorities on the subject. The professors of the faculty also rank among the authorities on jurisprudence.

Besides the Federal law school, Recife has a great number of colleges, schools, and technical institutes, having since early days been a center of learning. In fact, Recife holds a unique position among the centers of American scholarship, a group of distinguished men of letters, scientists, statesmen, and diplomats having been born within its boundaries.

The oldest daily paper of Latin America is among Recife's several excellent periodicals—the well-known *Diario de Pernambuco*.

There are also some very good hotels and cafés. The electric cars and principal streets are always crowded. Car service extends along most of the streets and to the suburbs, such as Olinda.

There are several bridges which connect the different sections of the town and some of considerable architectural beauty; on one of these the traveler may read the principal events of the history of the city. The governor's palace is at the end of the island of Santo Antonio. Facing it is a garden in which stands the Santa Isabel Theater.

Not far from Recife is Olinda, crowned by the church of Carmo, the charming old capital town which guards many traditions and offers magnificent views of Recife, the seashore, and the surrounding country.



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VIEW OF RIO DE JANEIRO TAKEN FROM THE SUGAR LOAF.

The picture reproduces the view of the city of Rio de Janeiro taken from the Sugar Loaf Mountain, which stands at the entrance of Guanabara Bay and which the Brazilian engineers made accessible by means of an aerial railway. At the right is seen part of the beautiful bay and in the background the Corcovado. On the left is seen Copacabana and in the foreground Faria Vermelha, suburbs of Rio de Janeiro.

TWO STATE CAPITALS.

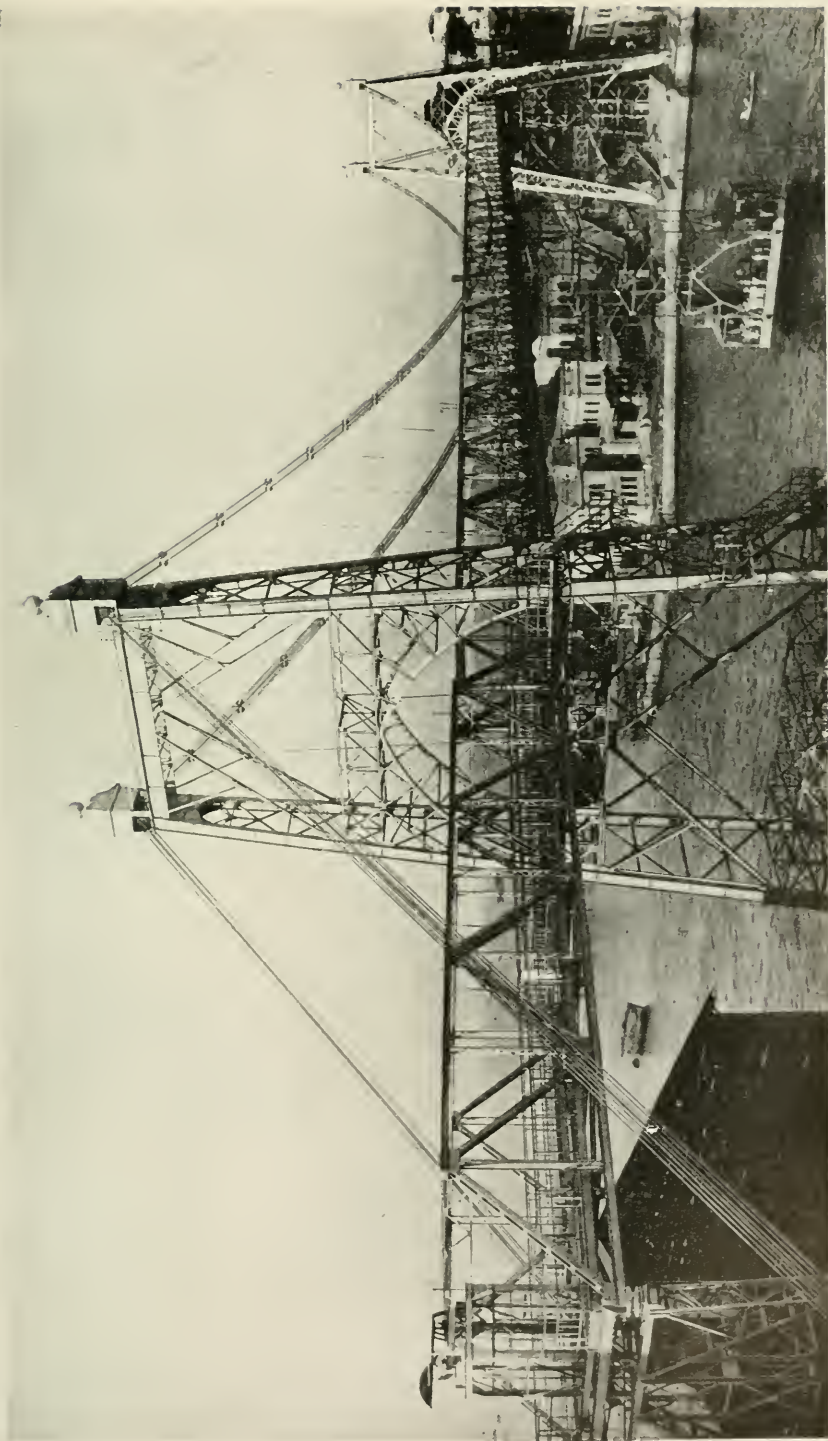
From Recife we went to Maceió, capital of the State of Alagoas. Maceió is a progressive town, with good facilities for landing. The town proper is at some distance from the landing place, with which it is connected by electric cars. It is well laid out over several slopes and has excellent gardens and parks, good buildings, and pleasant suburbs. The streets are wide, clean, and well paved, and car lines cross the town at all angles. One of the most attractive points is the lighthouse, from which one may enjoy fascinating views.

A little farther south lies Aracaju, capital of Sergipe, a State small in territory but which has produced some of the most brilliant intellects of the Republic. The town is small and pleasing, with wide streets, well shaded by trees pruned into fanciful shapes. The buildings are substantial, and a great deal of traffic crowds the streets, as there are several industries, the cotton mills especially holding an enviable reputation, and their product being in great demand in the southern States. Recently a deposit of oil was discovered within the town and is now under investigation.

BAHIA.

After several days of rough sea we saw the coast of Bahia at Rio Vermelho, a suburb; later the lighthouse appeared, and soon we were in a land-locked sea which bears the name of Bahia de São Salvador. The view from the vessel is beautiful and imposing. There are many places in the world that I call to mind, but few are comparable to Bahia. Its characteristics are very distinctive. An extensive group of houses covers an undulating surface, and on the water level a strip of warehouses and shops are connected with the upper town by elevators. On the blue sky a long and variegated profile is projected, with many dominant towers and round cupolas of churches, many of them heritages from colonial times. Bahia boasts of a long list of handsome buildings, and her churches and convents are of incalculable value. Although it bears many marks of the past and has an old stately aspect, it also offers all the conveniences of a modern city. Here one may find what Brazil claims as its inheritance from colonial days; here are to be found all the elements of that brilliant past, full of brave traditions, with people of many races and origins, that gradually, with the passing of ages, gave form and shape to the Brazil of to-day.

Bahia is the home of many of the greatest minds of the country, unsurpassed orators, poets of the highest type, and renowned scientists. To-day the population of Bahia is over 300,000 inhabitants, ranking as the second coastal town of Brazil and third in population in the Republic, with Rio de Janeiro first and São Paulo second.



ALEXANDRINO DE ALENCAR BRIDGE, RIO DE JANEIRO.

This structure was built to connect the island of Cobras with the mainland. The passengers are carried by a tramway underneath the bridge, operated by electricity

The record of Bahia involves some of the most brilliant chapters in the history of our continent, and those who know something of it would be well repaid for a visit to the city which was the capital of the vast territory of Brazil when no one had yet formed so much as a vague conception of its extent, even a notion of its wealth and potentialities. As the capital, Bahia was the first Portuguese intellectual center in America, and with its Jesuitical schools and colleges has enjoyed a great reputation from the early years of its colonization. In 1699 a college of artillery and military engineering was founded in Bahia, and later by the prince regent, afterwards King John VI of Portugal and Brazil, a Faculty of Medicine was added to its educational institutions.

VICTORIA.

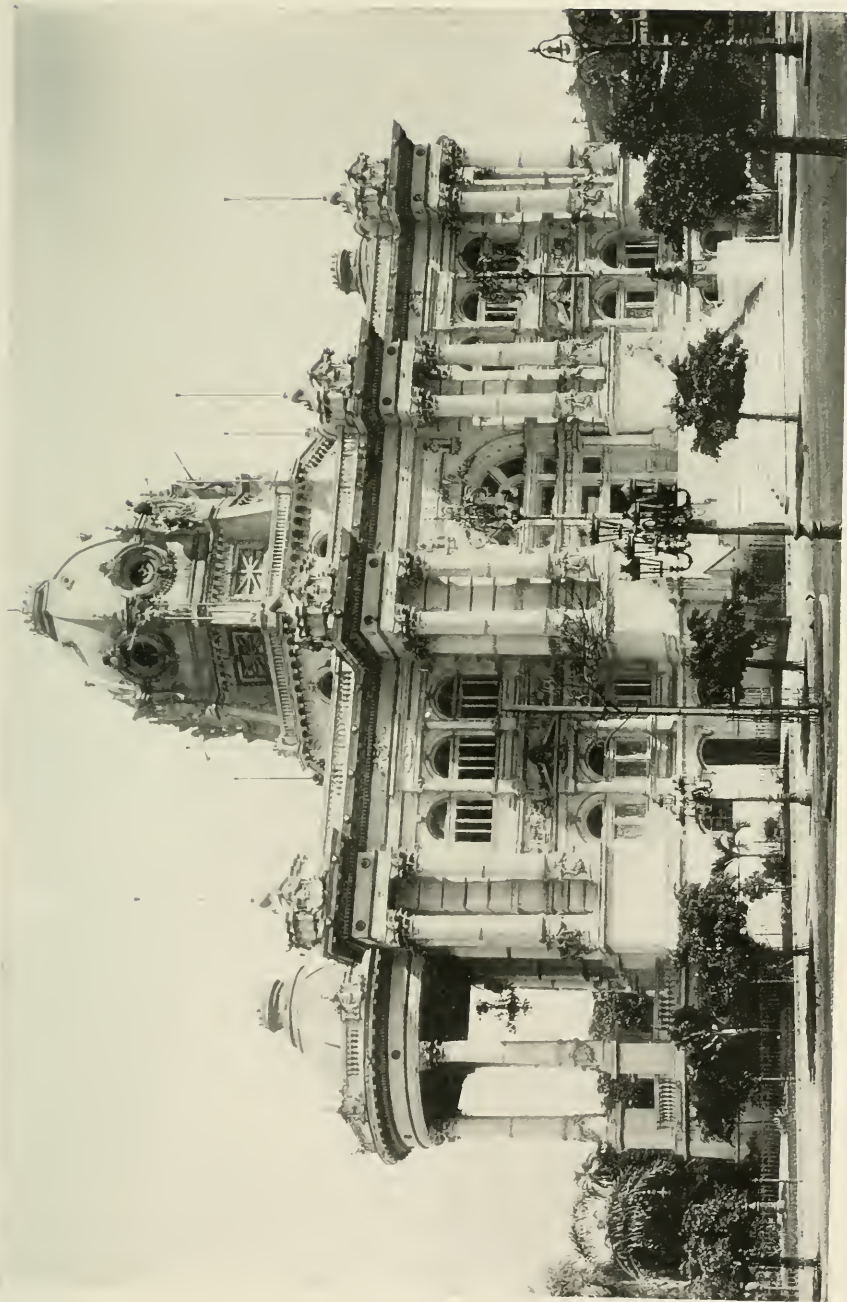
Victoria, capital of the State of Espirito Santo, was our next stop. Not far from the site of the modern capital is the town of Espirito Santo, formerly Villa Velha, founded in 1535 by the incumbent of the captaincy, the Portuguese knight, Vasco Fernandes Coutinho, who, according to tradition, had many difficulties to overcome, perhaps some caused by his own character, which was doubtless very determined and more or less domineering.

The entrance of the harbor of Victoria is charming. The natural channel, which connects the harbor with the ocean, is long and zig-zagged, and when the vessel winds its way through the inlet it seems as if it must surely be dashed against the rocks. Just when we are alarmingly close we notice an arm of the sea pointing a tortuous course through the mountains for us to follow. After following the passage through the most pleasing scenery, we caught sight of Victoria, one of the most picturesque and delightful towns we have ever seen, overspreading one of the hills from which one can see the towers of several churches and a large building with an imposing stairway—the government palace.

Victoria is connected with Rio de Janeiro by rail and the town offers all conveniences for residents and visitors. There are fine government buildings and a delightful municipal park. Victoria will undoubtedly enjoy a prosperous future as soon as the great resources of the State are utilized, as well as those of part of the State of Minas, which borders on Espirito Santo. All the shipments then will be made through the harbor of Victoria.

RIO DE JANEIRO.

Early in the morning, before we reached Cape Frio, the sea became rough. The coast is rocky, and as soon as we rounded the cape the scenery was phantastic. Huge rocks emerging boldly from the sea at regular intervals took the form of gigantic turtles, marine monsters



THE MONROE PALACE, RIO DE JANEIRO.

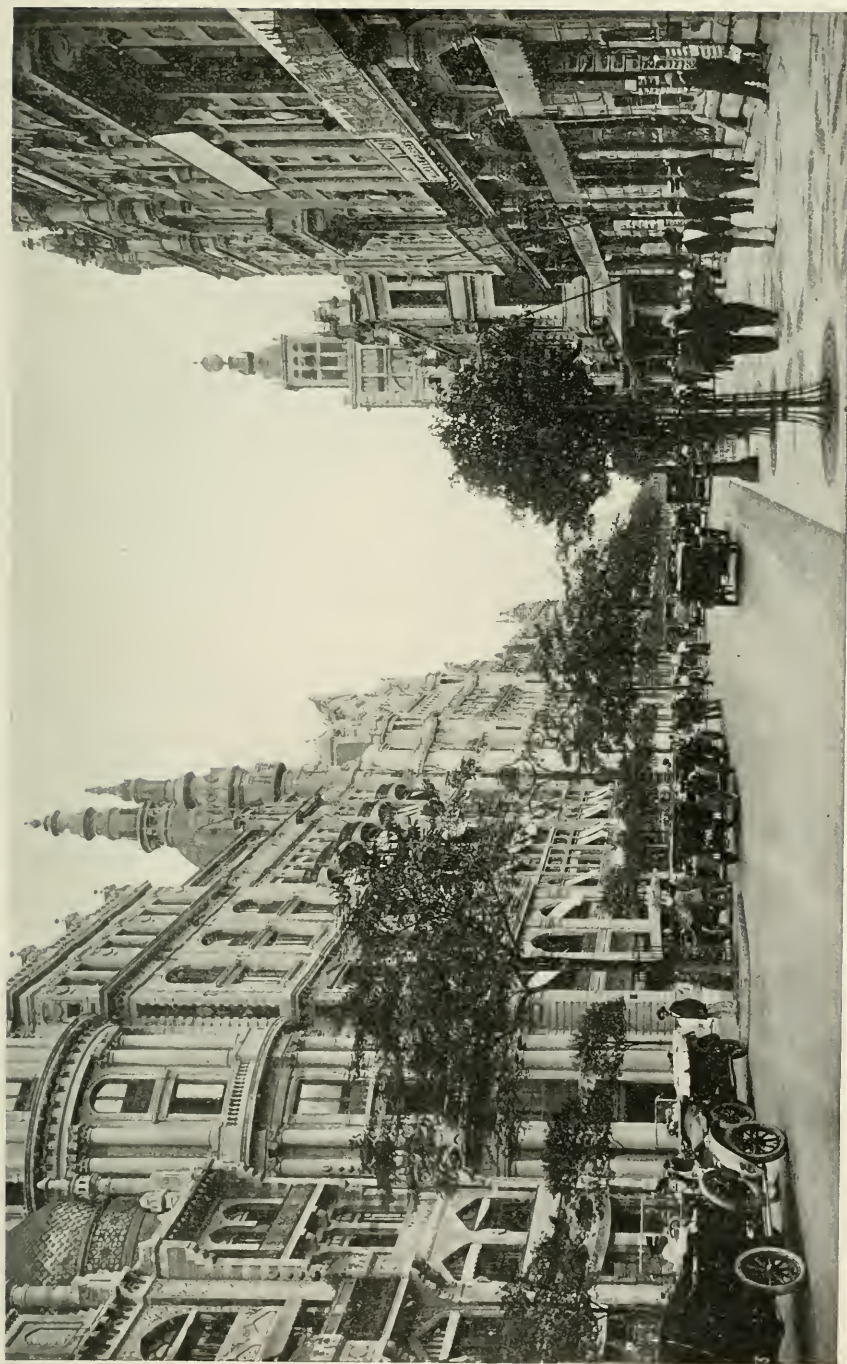
The Monroe Palace, in which the meetings of the Pan American Congress were held in 1906, is one of the most beautiful palaces in America. It stands at the junction of the avenues Rio Branco and Beira Mar.

of geological eras of the past, as if picketed as sentinels to protect enchanted treasures of the fables of old. And to give stronger coloring to the series of tableaux, and to show the insignificance of man before nature, our boat was tossed about like a small shell on the waves of the sea. After we passed some small rocks, posted like memorial stones, our steamer paused, awaiting the pilot. We were nearing Rio de Janeiro. Across a veil of mist we saw Pão d'Assucar (Sugar Loaf), Gavea, and, more dimly distant, the mountains. As soon as the pilot came aboard and took control the boat steamed faster and we drew nearer land. Soon we were passing the Santa Cruz Fortress.

The vessel was going with considerable speed, and we found ourselves in that small Mediterranean Sea, appropriately set as a rare gem firmly held by the glinting shore. This was Bahia de Guanabara. Before us the bay presented a fascinating panorama. The sea was very calm, and under the mellow sunlight lay the enchanted city on its gorgeous bed of greenery and flowers, with its jagged background of mountains.

From the deck I observed the scene, even more beautiful than my fancy had pictured it. The boat docked, and in a taxicab we went to find accommodations. It was an interesting search, as the best hostelrys were crowded with visitors from the States and neighboring South American Republics. On account of the war many people from the southern sections of the continent, who generally went to Europe for the season, turned to Rio de Janeiro. Finally, we found a place in a centrally located hotel at a few yards from the Beira Mar Avenue, the Monroe Palace, and Avenida Rio Branco. The traveler, after wintering in the centers of Europe and North America, would do well to spend the summer months in the charming "Empress of the Atlantic," as Rio is some times called. A rest or vacation there would not fail to be satisfactory and refreshing.

The Sugar Loaf, Corcovado, or Tijuca—one alone would be quite enough to make any city famous. Added to these natural marvels we find to-day the Beira Mar Avenue without a rival in the world, and the equally unparalleled Rio Branco Avenue, flanked by the most beautiful buildings of the city. On this avenue, just before it joins the Avenida Beira Mar, are located the Municipal Theater; the building of the Fine Arts School and Gallery, a very impressive edifice, which was erected through the efforts of Rodolpho Bernardelli, the great sculptor, who was its director at the time; the National Library; the Supreme Court; and, in dignified aloofness, at the juncture of the two avenues, the Monroe Palace, a structure of unique beauty erected in honor of the United States of North America. This palace, together with the visit paid by the Brazilian-Emperor, Dom Pedro II, at the centennial in commemoration of the inde-



AVENIDA DE RIO BRANCO, RIO DE JANEIRO.

This avenue is noted the world over for its beauty. It is wide and lined with beautiful buildings. On this avenue are the best stores and the newspaper offices. At one end is the Palace of the National Academy of Fine Arts, the National Library, the Supreme Court, Municipal Theater, and the Monroe Palace.

pendence of the United States, form the greatest tribute of friendship paid to the northern Republic by any country.

Rio de Janeiro may justly boast of its many handsome buildings, both private and public, and its monuments of artistic value, most of them from the chisel of Rodolpho Bernardelli, the genius of the continent. Who has not studied Brazilian history through his masterpieces?

The press of Rio de Janeiro is excellent. The newspapers are repositories in which one may find almost any needed data, as well as articles by the most prominent writers. O "*Jornal do Commercio*" publishes much valuable information and is itself a national institution.

Intellectually Rio de Janeiro is in direct and permanent communication with Europe, following with keen enthusiasm all that is taking place in the Old World, of which mentally Brazil may be said to form an integral part.

In the Federal capital there are excellent educational institutions, most of them founded by King John VI when Prince Regent, who was a great patron of science, art, and letters, and who brought to Brazil a number of artists and scholars to establish in the new empire a seat of learning and of art according to the exigencies of the new nation.

As a commercial center Rio is an emporium of a promising future. Its harbor is the largest in the world, and offers all the facilities for national and international trade.

Because of the facilities offered, the climate, with nine months of spring time and three of summer, and its wonderful resources, Rio de Janeiro, with its population of a million and a half, soon will be one of the greatest attractions of our continent, and one to which people from the northern hemisphere especially will go to spend the hardest months of the year.

SANTOS.

Santos is the largest Brazilian port south of Rio, the shipping center of the State of São Paulo, and the largest entrepôt of coffee in the world. Santos has an excellent harbor, with all facilities for loading and unloading vessels. As soon as the railroad to Bolivia is in operation no doubt that country will use the port of Santos for its communication with European countries, as well as with other sections of the rich interior of Brazil.

Santos is a progressive city with all modern improvements. There are many interesting buildings to be seen; streets and squares are well paved and clean, although extensive traffic is conducted through them. In Santos three distinguished men were born—Bartholomeu de Gusmão, born in 1685, the inventor of the aerostat and the father of aerial navigation; his brother, the statesman, Dr. Alex-



Photo by Malta, Rio de Janeiro.

AVENIDA DO PRESIDENTE WILSON, RIO DE JANEIRO.

The city of Rio de Janeiro dedicated to the President of the United States, as a mark of admiration of his work in the great war, one of the principal streets of the city, known formerly as Rua da Carioca.



A VIEW OF THE AVENIDA BEIRA MAR, RIO DE JANEIRO.

The magnificent Avenida de Beira Mar, which encircles Guanabara Bay, is without parallel in the world.

andre de Gusmão, secretary to King John V, and who was called by one of the great diplomats of the century the "Father of American Diplomacy"; and the scholar, José Bonifacio de Andrade Silva, the patriarch of Brazilian independence and scientist of renown in Europe. His tomb is in the old church of Carmo, open to the public.

Near Santos stands the old town of São Vicente, founded by Martim Affonso in the sixteenth century, and the headquarters of the old captaincy of São Vicente, the first Portuguese settlement in Brazil.

On the other side of the bay facing the ocean is the famous beach of Guarujá, a shore said to be unrivaled on the Atlantic.

Santos has about 80,000 inhabitants, and is an intellectual center, although very close to São Paulo. It is the terminus of one of the best railroads of South America, connecting Santos with the capital of the State, the city of São Paulo.

THE SOUTHERN COAST.

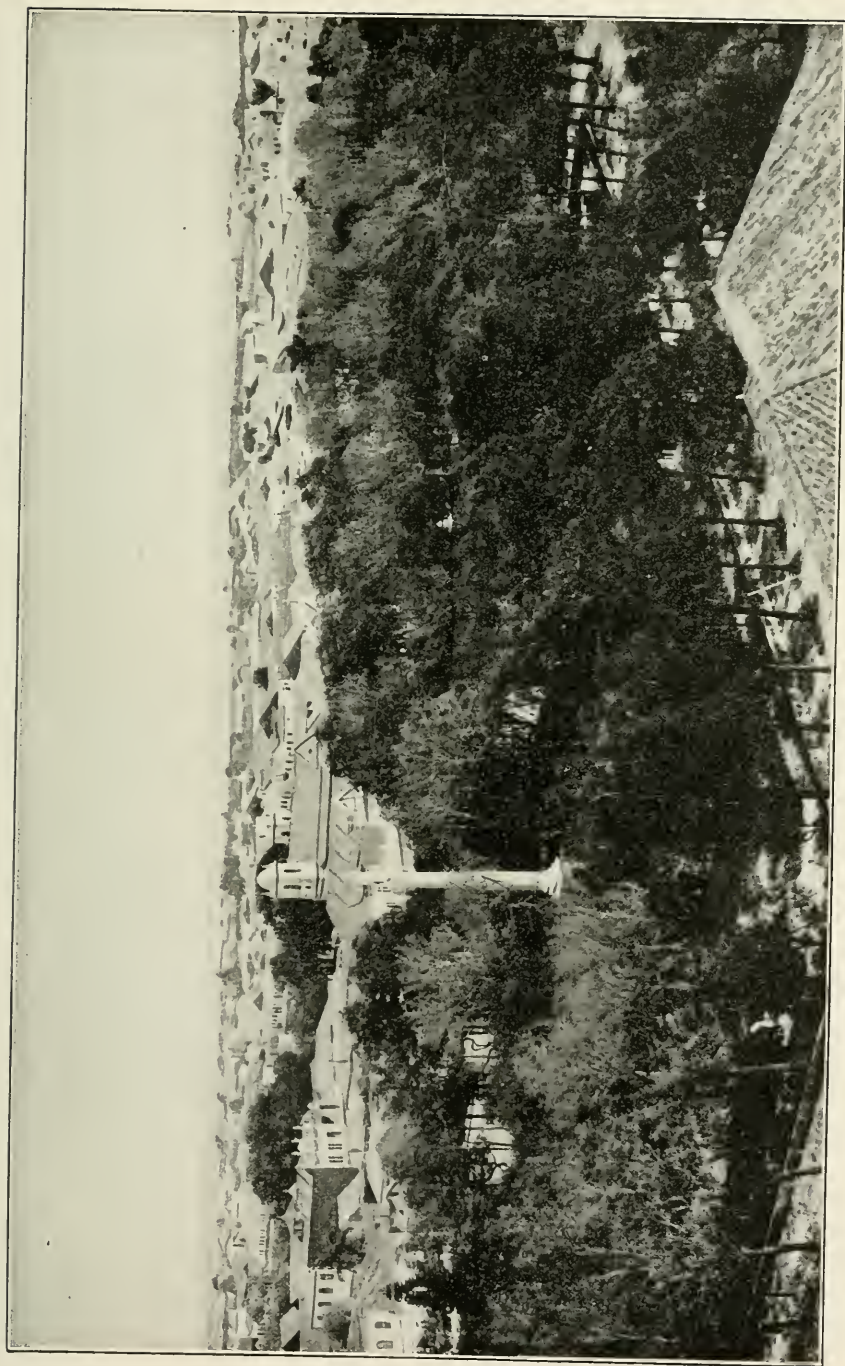
The largest cities of the southern coast are located on the Lagôa dos Patos in the State of Rio Grande do Sul. The intermediate harbors, although conducting an important traffic, are not of international interest at the present time. Undoubtedly in the near future they will be of commercial importance, as they have a very rich country backing them and an industrious and progressive though scattered population.

On the beautiful bay of Paranaguá there are two interesting harbors in Paraná State, the greatest producer of *herva matté*—Paranaguá and Antonina. The bay is one of the largest of Brazil and accommodates the biggest passenger boats.

Paranaguá is a city of 15,000 inhabitants, of a colonial aspect, though it has some modern buildings. It lies at the head of the Curitiba Railroad, which is a marvel of Brazilian engineering. The town was founded in 1560 by adventurers who were searching the country for gold. Until the beginning of the past century this city was the most important of the State.

At the end of the bay Antonina was founded in 1797. To-day it is increasing rapidly in population, numbering now something over 10,000 inhabitants. The town is built on a narrow strip of land between the bay and the mountains. Its appearance is very picturesque and the climate excellent.

Antonina and Paranaguá are the principal harbors for exports of *matte*, the staple commodity of the State, the demand for which is constantly increasing. During the period of European reconstruction it is possible that if shipping conditions improve this State may export a quantity of timber, which is found in abundance and of a superior quality in the vicinity.



GENERAL VIEW OF THE CITY OF RIO GRANDE DO SUL, STATE OF RIO GRANDE DO SUL.

The most important town and harbor of this section of the coast is Florianopolis, capital of the State of Santa Catharina, with a population of 30,000, situated on a small island facing the continent. The harbor is on the channel. The streets are neat, well paved, and attractive, though narrow. Public buildings and churches are worthy of attention, as well as the inviting private residences. The city has several well-kept parks, among them the Quinze de Novembro, where stands a monument for the heroes of the war with Paraguay. The suburbs of Florianopolis are exquisite, and among them Praia de Fora holds a commanding position, with its beautiful houses emerging from pleasing gardens.

On the mainland across from Florianopolis is the town of São José. It is expected that in the near future the cities will be connected by a bridge.

THE LAKE CITIES.

The southern section of Brazil, the State of Rio Grande do Sul, is reached by several boat lines from various harbors in the Lagoa dos Patos. This section and its inhabitants are worthy of special study, as they have always held a unique position in the history of Brazil. They were the principals in a conflict or period of contention which unhappily drenched Brazil in blood for many years during the "War of the Farrapos," which, however, ended honorably for both parties.

Rio Grande do Sul was settled in the early days by the colonists from the Azores, who were sent there by the secretary of John V., Dr. Alexandre de Gusmão. The history of Rio Grande is filled with heroic deeds, and in all the military and political events of the nation Rio Grande has played a leading rôle.

The work preparatory to the opening of the Lake of the Patos to large boats was a great task, but fortunately the indomitable will of the Riograndenses had the good fortune to find the engineers and contractors who helped them to accomplish their desired objective.

The city of Rio Grande do Sul, near the entrance of the lake, was founded in 1737 by colonists from the Azores, and to-day has a population of over 50,000. The town is very busy and the harbor is actively engaged in the export trade, consisting chiefly of xarque (dried meat), hides, and wines. Most of the streets of Rio Grande do Sul are narrow, though several are wide and long. The city has parks shaded by spreading trees; the most interesting is the Tamandaré, wherein stands a statue of Bento Gonçalves, the hero and chief of Rio Grande. This park has romantic lakes. The parks General Telles, São Pedro, and Sete de Setembro are attractive also. There are fine buildings, notably the customhouse, the municipal building, and the federal barracks.



GUARUJA BEACH, SANTOS.

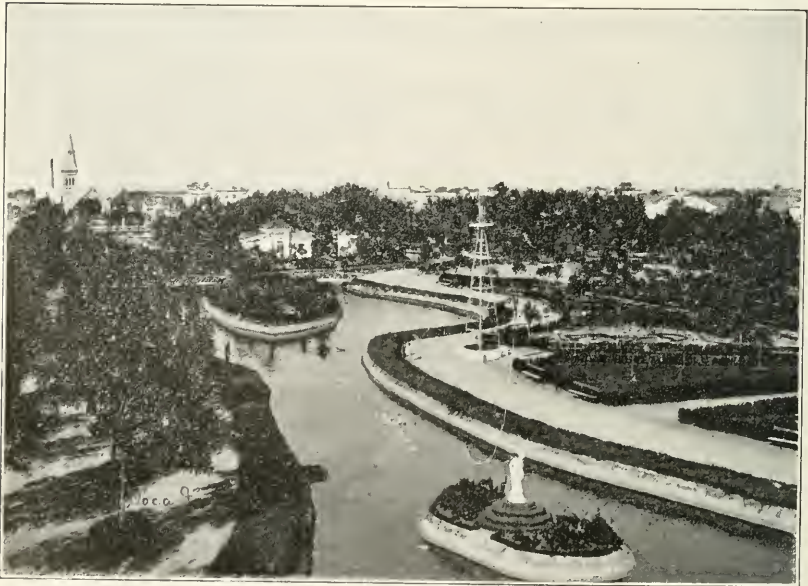
Guaruja Beach is a popular seashore resort for the Brazilian people.



STREET IN FLORIANOPOLIS, STATE OF SANTA CATHARINA.



GENERAL VIEW OF PORTO ALEGRE, STATE OF RIO GRANDE DO SUL.



TAMANDARE PARK, RIO GRANDE DO SUL.

Tamandare Park is spotted with numerous flower gardens intermingled with small artificial lakes. In this park is the monument of Bento Gonçalves, the hero of Rio Grande.

Penetrating a little farther along Lagoa dos Patos on the left side we find the São Gonçalo channel, which connects this lake with Lake Mirim, and on its shore is Pelotas, a progressive city of modern construction, surrounded by fields for drying meat. This city has a park that is a veritable botanical garden. The streets are good, the principal one being the Quinze de Novembro, along which one sees the municipal buildings, the Mesericordia, and the public library.

The town of Porto Alegre, capital of the State, is situated at the end of this lake. The city, founded in 1772, is built on an elevation and offers to visitors a beautiful sight. It maintains its old, conservative appearance with narrow streets. The parks Senador Florencio, Julio de Castillo, Marechal Deodoro, Customhouse Park, and the Park of Harmonia are attractive for their great old trees. Extensive traffic is carried on through the Sete de Setembro Square and Andradas Street, while Independencia Street is probably the prettiest in town. The city of Porto Alegre has several beautiful buildings. At Deodoro Place is the government palace, and the State congress. The suburbs are pleasant, with many beautiful châteaux surrounded by gardens.

The higher classes of Rio Grande are cultured and traveled. They are especially familiar with Europe. There are writers and scientist resident in the State and in Rio de Janeiro. The educational system is highly satisfactory, and the capital of the State has many secondary schools and colleges of the professional branches and a military school of brilliant traditions. The newspapers are also excellent.

The three towns of which we spoke in the State of Rio Grande do Sul are connected with São Paulo and Rio de Janeiro by railroad, as well as with Montevideo to the south. The distance between Porto Alegre and Rio de Janeiro by rail is 2,170 kilometers.

All those who have had the opportunity to tour the coastal towns of Brazil from north to south have been uniformly impressed. Each has its own charms; all of them provide comforts and conveniences; each has its peculiar local color and individual atmosphere; but in all there is to be found hospitality and a uniformity of customs and manners, while the same frankness and congenial spirit of democracy prevails throughout. Always industrious and honest, eager to be classed among the most progressive nations, the Brazilians labor faithfully with that end in view. It is an exception to find a town without a brilliant past, the birthplace of talented citizens.

He who has the privilege of traveling through the Brazilian Republic observantly, alertly, will be struck by the realization of the limitless resources, beckoning opportunities, and promising future of the land, peopled by a gallant folk of a race of brilliant traditions.

MINERAL MONOPOLIES OF THE AMERICAS¹

PART II.

THE arid portions of the continents are commonly designated as "desert wastes," and are avoided by man and beast because of the inhospitable conditions that there prevail. Most of the deserts of the world with their dunes of drifting sand and lack of all vegetation are useless and exist as great obstacles in the development of the countries adjoining them. Many of those of the Western Hemisphere, however, do not come under this category, and three of the important mineral monopolies which the American continents enjoy are found only in these deserts and are there solely because of the arid climatic conditions. These are the nitrate and iodine deposits of Chile and the borax deposits of Chile, Bolivia, Peru, Argentina, and the western United States.

Of these the nitrate deposits of northern Chile stand in a class by themselves and deserve all the attention that they have received. A recent writer² has well stated the situation in the following words:

Without the Chilean deposits, it would appear, the world would have been deterred for many decades, if not longer, in reaching the point of industrial development in which it is now involved, so far-reaching can be the effect of a single mineral deposit. There is little doubt but that it was Chilean nitrate that won the war for the Allies. Had Germany possessed a navy sufficient to cut off the supply of nitrate from northern Chile it would have been impossible for the Allies to have produced the quantity of explosives required, as all of the other sources of nitrogenous compounds would have been entirely inadequate. In this respect Germany was in a much better condition on account of the possession of elaborate plants for the manufacture of nitrates from the air.

Even in times of peace much Chilean nitrate is used in the manufacture of explosives, and without such materials, mining, quarrying, and excavation work would be carried on with extreme difficulty and only in the laborious methods employed by the ancients and the primitive peoples of all ages. It is, however, as a fertilizing product of unusually high value that the countries of the world have long looked for their annual supply of Chilean nitrate, and the agricultural countries viewed with great apprehension the diversion of their usual supply of this useful commodity into war channels.

From time to time we hear that the importance of the natural nitrates is decreasing and that within a few years they will be en-

¹ By Benjamin L. Miller.

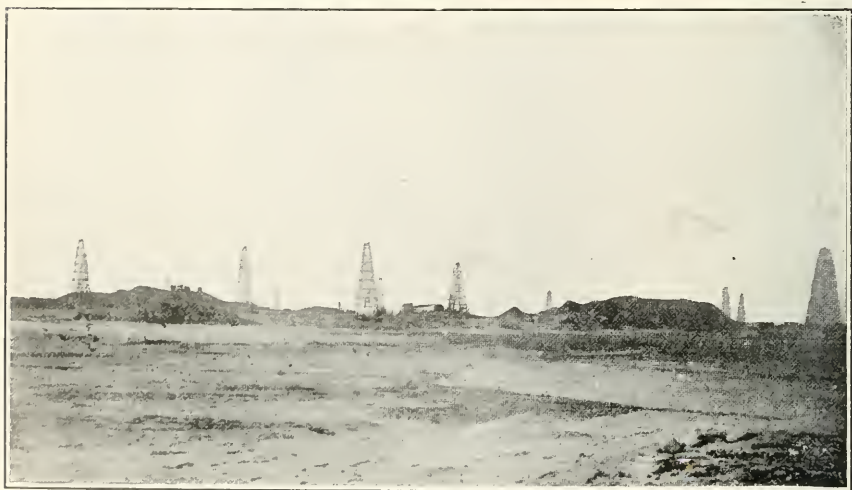
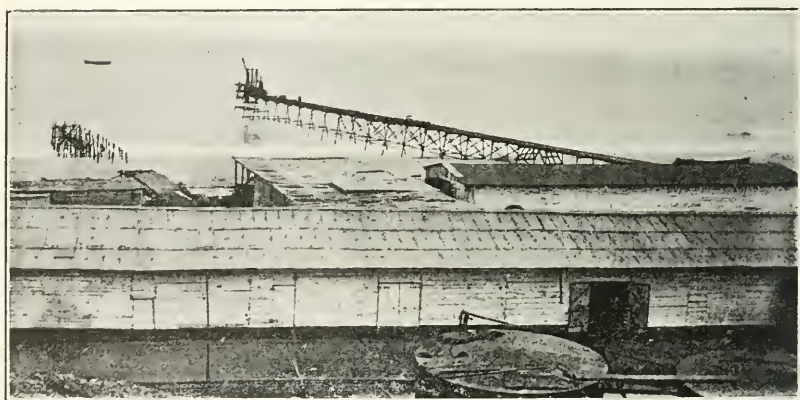
² Pogue, J. E.: U. S. National Museum Bulletin No. 102, part 2, p. 11.



Photograph by Brown Bros.

OIL COUNTRY NEAR VERA CRUZ, MEXICO.

Oil is one of the rapidly advancing industries in Mexico to-day. New deposits are constantly being discovered. In the foreground of this picture is a lake of oil, not water.



PERUVIAN OIL FIELDS.

Upper picture: A section of Zorritos, showing how near the sea some of the oil wells are situated. Center: Warehouse, tanks, and loading pier at Zorritos. Lower picture: A view of Negritos, one of the richest of the developed oil regions of Peru.

tirely supplanted by the manufactured nitrogenous products. No one would dare deny such a possibility, although at the present time there is nothing to indicate its probability.

In view of the fact that the November, 1918 (English edition), number of this BULLETIN contained a full account of the Chilean nitrate industry it is not necessary to include here a lengthy description of the district. Suffice it to say that no other desert of the world has ever yielded such riches and nowhere else can one find as many small towns and settlements located in a region entirely devoid of all vegetation. Several railroads traverse the nitrate fields, and the silence and isolation of the usual deserts is lacking, and instead one sees on all sides indications of activity and evidences of man's energy in overcoming obstacles. Water must be brought to the residents from the higher Andes lying some distance to the east, and all supplies of food must be brought from central Chile or from other countries; but so satisfactorily are these wants supplied that thousands of people live contentedly in these districts and would not willingly remove to any other section.

Although approximately 60,000,000 tons of nitrate have already been removed and the annual production is at the present time about 3,000,000 tons, there seem to be reserves sufficient to last for 200 and possibly 300 years to come. No other country possessing mineral monopolies occupies such a favorable position as does Chile in this respect, and there is no doubt but that the Government revenue obtained from the export taxes will effect wonderful changes in the country through the building of railroads and other industrial improvements.

In comparison with nitrate, Chile's monopoly of iodine may seem to be insignificant, and yet in the aggregate it amounts to a great deal. The iodine occurs everywhere in association with the nitrate and is recovered as a by-product in the process of nitrate refining. The amount varies greatly in different parts of the nitrate pampas, but is rarely absent. The iodine compounds seldom constitute as much as 1 per cent of the deposits and have not been detected in any place as a pure deposit. For these reasons iodine could scarcely be sought on its own account in the Chilean deserts.

Iodine has long been obtained from the ashes of seaweeds gathered along the coasts of various countries, and considerable still comes from this source, although much less than that obtained from the Chilean nitrate fields.

Until the outbreak of the war the various nitrate oficinas were limited by a trade agreement in regard to the amount of iodine which they were permitted to market, for the reason that the world's demand in normal times is not great enough to require as large an amount as might be produced. The great demand for the product



GLIMPSES OF COPPER MINING IN MEXICO.

Upper picture: General view of the country near Cananea, Sonora, showing the smelter of the Cananea Consolidated Copper Co. Center: Another view of the same company's operations. Lower picture: The smelter can be distinguished by the tall smokestacks. On the right of the picture are to be seen several mining villages.



A COPPER MINE IN CHILE.

The United States, Chile, and Mexico lead the other American Republics in the production of copper. Altogether the Americas produce nearly three-fourths of the world's supply. This mine in Chile is worked by a corporation from the United States and employs thousands of laborers.

in the war hospitals of Europe increased both the demand and consequent production, and it was indeed fortunate that the increased consumption could be so easily supplied by increased production, and lives were saved, according to reports, by its generous use in the treatment of wounds.

The iodine is extracted from the solutions which have yielded the nitrate. The process of nitrate refining consists in boiling the nitrate-bearing earth with pure water, which dissolves the nitrate, iodine compounds, and common salt. The solution is then drawn off into cooling pans, where the common salt is quickly precipitated, and thence into other pans, where most of the nitrate crystallizes out. The remaining liquid is pumped back to the boiling tanks and used over and over, each time becoming richer in iodine salts, which are not precipitated during the cooling process. The solution finally reaches a point of concentration where it is profitable to treat it with sodium acid sulphite, which precipitates the iodine. After straining and compressing the product the refined iodine is obtained by a simple retorting process. The whole operation of iodine recovery is a very simple and cheap one, and the amount which might be produced so much greater than the demand that Chile's iodine monopoly seems secure so long as its production of nitrate continues.

It is strange that of all the known deserts of the world those of northern Chile should be the only ones with important deposits of nitrates and iodine, but investigations show that in no other place have all the determining factors been present. There is still some dispute as to the origin of these deposits, notwithstanding the fact that many investigators have attacked the problem.

In the case of borax the requisite conditions for the accumulations have been more widespread, and the central Andes of northern Chile and Argentina, western Bolivia, and southern Peru contain a considerable number of borax lakes, and similar conditions prevail in the western portion of the United States in the States of California, Nevada, and Oregon, and in a few sections of Europe and Asia.

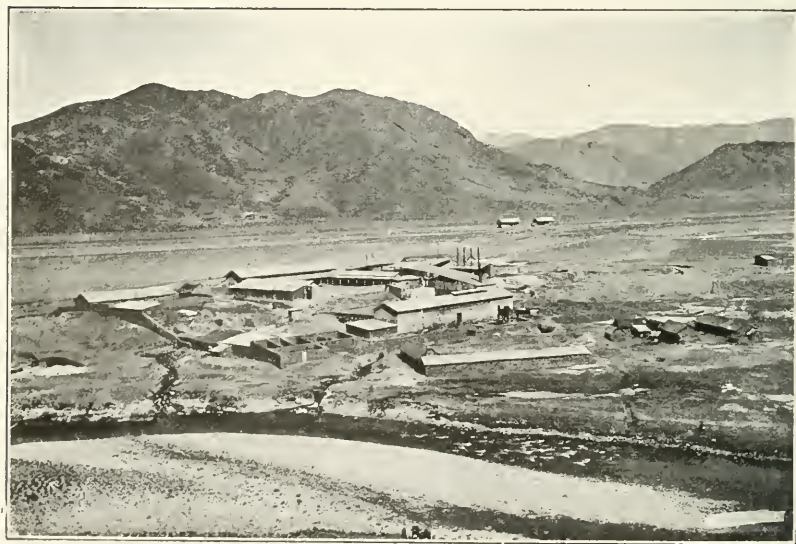
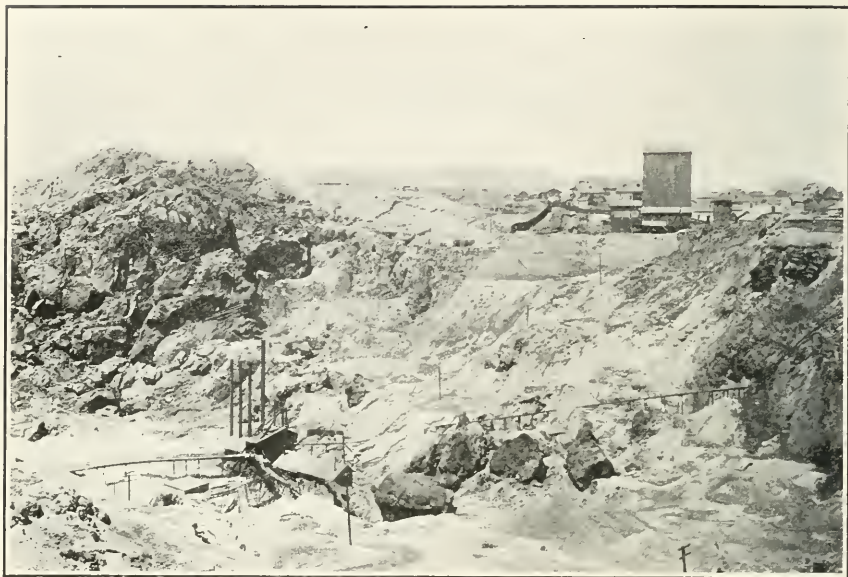
The borax salts, of which there are several of somewhat different composition, are found in closed basins into which water drains from the surrounding regions. Arid climates where these basins occur cause the water to disappear by evaporation, leaving behind the salts previously held in solution. In the Andes the borax compounds are believed to have been derived from gases given off from near-by volcanoes, but elsewhere the substances may have come from boron-bearing, rock-forming minerals which in the process of rock decomposition have produced soluble compounds.

The Death Valley region of southern California and Lake Ascotan in northern Chile supply most of the world's demands for borax,



COPPER MINING IN VENEZUELA.

Copper is one of the widespread mineral products in which no country has a monopoly. These views are of the mines located in Aroa, State of Lara, Venezuela. The upper picture shows the methods of transporting the mineral from the mines.



COPPER MINES IN PERU.

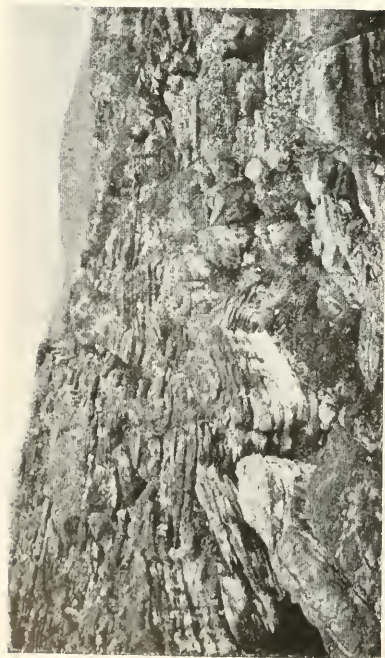
although Turkey and Italy have an annual production sufficient to supply domestic needs.

The Death Valley borax deposits owe their development to their accessibility to important lines of railroad, and a branch line has now been constructed into the borax district. Lake Ascotan is also favorably situated along the line of railroad connecting Antofagasta and La Paz. Other Andean borax deposits are reported to be equally rich, but for the present can not be worked with profit on account of their less favorable situation with reference to transportation lines.

The Death Valley and the Lake Ascotan deposits present some striking contrasts when compared, although the deposits themselves are very similar. Death Valley is a great region of depression produced by a block of the earth's crust, 10 miles in width, dropping vertically a distance of 6,000 feet. The lowest portion of the valley is about 500 feet below sea level, the lowest point in the earth's surface in the Western Hemisphere. Lake Ascotan, on the other hand, lies 12,220 feet above sea level and is bordered by mountains rising to an elevation of almost 20,000 feet. In Death Valley the summer temperatures are excessively high, according to report as high as 137° F. in the shade, and yet the borax workers have lived there during the hottest season, but in double-roofed houses well supplied with running water. At the altitude of Lake Ascotan the temperatures are never high, although the reflection of the sun's rays from the glistening white crystals is at times very hard on the eyes.

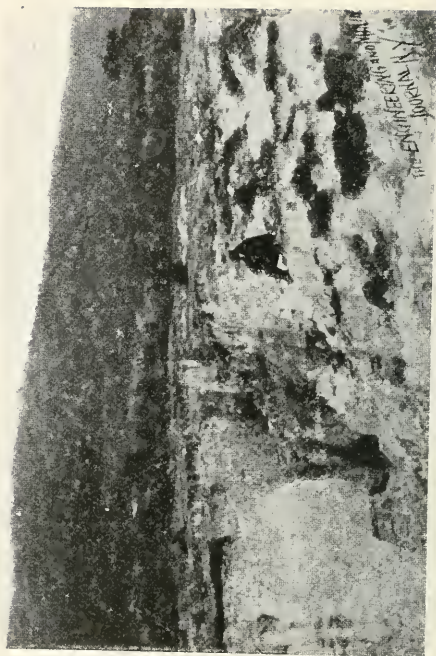
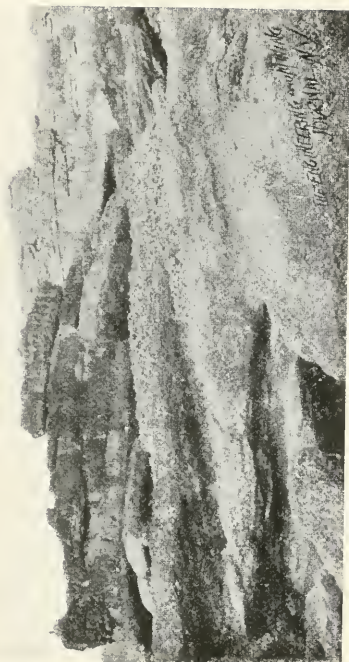
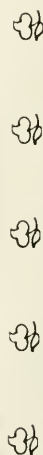
Lake Ascotan is not a lake in the usual acceptance of the term, as it contains only a few pools of water throughout its extent of about 24 miles in length and 6 miles in width. It has at times been covered with water, but the amount of water which normally enters the basin does not equal the amount which would be evaporated from so large a water surface, so that the bodies of water have shrunk and occupy only the lower-lying portions of the valley, leaving the greater portion covered with the white crystals of the borate and other salts. In portions of the lake the borate salts are so free from the associated salts of less value that they can be dug by themselves, and only require drying before shipment.

The quantity of borates contained in the Andean regions is so great and the quality so good that these districts would completely supply the world's demands if it were not for the high cost of transportation. As it is, they dominate the situation at the present time and bid fair to retain this position for centuries to come. In fact, as transportation facilities are improved they may obtain an almost complete monopoly in the supply of this important substance.



IN THE BRAZILIAN DIAMOND FIELDS.

Bahia, Brazil, leads the world in the production of black diamonds, and to all indications will continue to do so indefinitely. Upper left: A ridge of diamond-bearing pink quartzite. Upper right: Lodges of pink quartzite that have been seraped and washed by millions of years. Lower picture: Old diamond washing at Mosquitoes, near Lencoes, Brazil. This shows the white shales that underlie a diamond bed.





DIAMOND MINING IN BRAZIL.

Brazil possesses the only known economic deposits of black diamonds. Their exceptional hardness makes them desirable for drilling purposes. The upper picture shows the first stage in washing diamond-bearing gravels. Water thrown on the gravel in a sloping trough washes away all the lighter minerals, of which quartz is the most abundant. The lower picture shows the residue of the first operation put into a batea, or miner's pan, and rotated rapidly on the surface of the stream. The diamonds remain in the center of the batea while the other minerals are thrown to the side and raked off by hand.

Brazil possesses a monopoly that is scarcely appreciated by persons unfamiliar with the mining industry, and especially with the modern exploratory methods. Its possession of the only known economic deposits of black diamonds, or carbonados, means much to the members of the mining profession who use the bulk of the stones in the diamond drills now so extensively used in mining districts for the purpose of obtaining samples, called cores, from the bore holes. The drill consists of a hollow tube in which several pieces of the black diamonds are embedded in the rim and which cut the rocks as the drill is rotated, and so furnish in the core a section of the rocks penetrated. Any substance harder than the rocks to be drilled could be used, but the harder the better, and for that reason the diamond is most desirable on account of its superior hardness. The gem diamond and the black diamond both consist of carbon, but differ in that the former is white, transparent, and possesses good cleavage, whereas the latter is gray, brown, or black, translucent to opaque, and without cleavage. Because of its lack of cleavage it is much more desirable, as it will withstand more pressure and wears away more evenly without splitting or cleaving.

The black diamonds are found in association with the gem diamonds in stream gravels in the interior of the State of Bahia, Brazil. Previous to 1856 these dark stones were thrown aside as useless, but they now are more sought after than the clear stones. It seems that their first use in diamond drilling was in coal prospecting in Pennsylvania, in 1870. Since that time the value has gradually increased until it is now from \$100 to \$130 a carat, with a constant demand in excess of the supply. The largest stone thus far found weighed 3,078 carats.

The white and black diamonds occur in a great thickness of sandstones, but so sparingly that it is not practicable to attempt to extract them from the parent rock. However, when the sandstone decomposes and falls to pieces the stones are liberated and are carried into the streams where they are dropped with other pebbles.

The workers collect the gravels in the streams and especially in any holes in the channel where the diamonds and carbonados are most apt to collect on account of their high specific gravity. They proceed to wash the lighter minerals away in a great wooden bowl, known as a batea. The process is similar to that long used by the gold seeker, the batea being similar to the ordinary "miner's pan."

Nearly all the work is carried on by individuals working independently, or at most by a few workers, but seldom by any large company. The equipment amounts to very little and so favors the independent worker, and at the same time the larger organization might lose many of the more important stones on account of the ease with which they could be appropriated by the employees.



EMERALD MINES OF COLOMBIA.

Colombia has furnished beautiful deep green emeralds ever since the sixteenth century, and although the mines have not been in operation for several years, they are not exhausted and will doubtless continue to contribute to the world's supply. The deposits are under the control of the Government and leased to the operators.

The areal extent of the present diamond-bearing rocks and also their great thickness in Bahia seem to promise much in regard to the aggregate amount of black diamonds which the region may eventually furnish, but it does not seem as though it would be possible to materially increase the annual production, much as this is desired. The supply in the streams will be renewed as the parent rocks decay, but the process is a slow one, even though the region is well within the Tropics, where in general rock decomposition is at a maximum.

Whether Brazil will continue to furnish the only black diamonds of consequence or not is, of course, a question which can not be answered, but it is a peculiar fact that, in spite of the rather large number of diamond localities in various parts of the world, thus far Bahia has no competition in the production of these useful black diamonds.

The world's yearly consumption of incandescent gas mantles amounts to about a third of a billion and is continually on the increase. These are used all over the world and yet the chief material from which they are made is obtained in only a few localities—notably Brazil. The result of careful experiment by Count von Welsbach, over 20 years ago, proved that the brightest light could be obtained by the use of mantles of thorium nitrate derived from the mineral monazite. As a mineral it is widespread in the ancient crystalline rocks of the globe, but as it seldom constitutes more than a small fraction of 1 per cent of the rocks, it is impracticable to obtain it directly from that source. It is only where the rocks have decomposed and the grains of monazite have been concentrated in river or beach sands that it can be obtained on a commercial scale.

The three countries of the world where monazite sand has been produced in quantity are the United States, Brazil, and India, although Norway and some other countries have produced small amounts. From 1887 to 1895 the United States controlled the world's markets, the material coming from stream sands in North and South Carolina. In the latter year Brazilian monazite from the State of Bahia entered the market and quickly replaced the product from the United States, which has now declined to insignificant amounts. In 1911 monazite from Travancore, India, entered the market in competition with that from Brazil, but up to the present the effect of this competition has not been determined. The practical monopoly which Brazil enjoyed from 1895 to 1911 may continue or Brazil may possibly give place to India, or the market may be supplied jointly by the two countries. The material from India averages higher in its content of thorium, but there is considerable doubt in regard to the extent of the Indian deposits. On the other hand, Brazil is known to possess reserves sufficient to meet the world's needs for many years to come.



VIEWS OF THE CHILEAN NITRATE REGION.

Explosions in the nitrate field, a few feet below the surface, throw the caliche in a form easily handled by laborers, as shown in the upper picture. The lower picture shows the caliche piled up ready to be transported. The nitrate deposits of Chile form one of the greatest mineral monopolies in the world.

The story of the Brazilian monazite industry is interesting, as showing the way in which a neglected product may quickly assume considerable prominence. When John Gordon discovered rich deposits of monazite beach sand he immediately entered into an agreement with Welsbach to supply him with the needed material for the Welsbach incandescent mantles which he was then producing. For several years Gordon had the monopolistic control of all the Brazilian monazite, and even at the present time is the most active producer. He located rich deposits along the beaches in the States of Bahia, Espirito Santo, and Rio de Janeiro, and later somewhat lower grade deposits were found along some streams in the States of Minas Geraes, Espirito Santo, and Rio de Janeiro.

At first some places were found rich enough to ship just as the material was dug, due to the fact that the ocean waves working over the beach sand for many years had effectively concentrated the monazite particles brought down from the interior by streams. The concentration was so complete on account of the much higher specific gravity of the monazite in comparison with most of the associated rock minerals, the rich patches were exhausted, and in recent years it has been necessary to erect concentrating plants to produce a product high enough for shipment.

Until the outbreak of the war most of the Brazilian monazite went to Germany, where the thorium nitrate was produced for shipment to the incandescent mantle factories of the world. However, the present indications are that the United States will soon be able to replace Germany in this respect—a prospect especially pleasing on account of the extensive use of mantles in this country.

Another of the rare earths which has recently received considerable attention is zirconium, and thus far Brazil bids fair to control the world's markets on account of the high-grade ore which that country contains. The present use is mainly in the production of refractory articles, for which it is especially well adapted. A further use has been in the production of zirconium steel, which is still in the experimental stage, although it has been claimed that it makes an unusually resistant armor plate and is excellent for cutting tools. Zirconiferous sands can be obtained in various parts of the world, but a Brazilian product, sold under the trade name of "Zirkite," obtained in the States of São Paulo and Minas Geraes, seems to be so much superior that it will probably supply the world's demands for some time to come. In addition, if the usual zircon sands come into use, Brazil is also in a good position to control the world's markets on account of the by-product zircon material obtained in the concentration of monazite.

Of the mineral products in which the Americas produce the bulk and dominate the world's markets, radium has attracted especial



THE CHILEAN NITRATE INDUSTRY.

Although there are several large deserts in the world, the arid region of Chile is the only one that produces nitrate. Upper picture: Nitrate workers being transported to work. Center picture: Digging the nitrate and iodine-bearing earth. Lower picture: Travel de luxe in the nitrate region.

attention in recent years. The use of this rare metal in medicine is known to everyone, although its efficacy in treatment of cancer and other diseases is even yet a question of some dispute. Of perhaps as great importance is its use in the manufacture of luminous paints, for which there is an increasing demand. The first radium salts were extracted from pitchblende from Bohemia by Madame Curie. The interest aroused in her discovery stimulated search for radium-bearing minerals in all parts of the world and with marked success.

It soon developed, however, that there were comparatively few places where the ores were rich enough to warrant operations. At the present time the United States is foremost in its production of radium ores, and a recent report announces that the Bohemian deposits are practically exhausted—a situation which gives increased value to the carnotite deposits of Colorado, which seem to be sufficiently extensive to supply the world's demands for many years.

Copper is one of the widespread mineral products in which no country possesses a monopoly. The figures of production for 1916, however, show that the United States produced almost two-thirds of the world's total. Japan was second, then Chile, Canada, Mexico, Spain and Portugal, and Peru. Altogether the Americas produced almost three-fourths of the world's production. This control of one of the most necessary metals is of extreme importance in international commerce, and especially so on account of the necessity of most of the European countries being compelled to purchase their supplies on this side of the Atlantic. The outlook for the future is very bright. The United States may soon reach its maximum production, but Chile and Peru will undoubtedly rapidly increase, and perhaps double or treble their present output within a comparatively few years, if the developments now in progress and the latent opportunities in those countries furnish any criterion for prediction.

In comparison with copper, bismuth is of minor importance, but its use in the manufacture of type metal, low fusible alloys for safety plugs and fuses, and in medicine, places it among the important economic metals. Bolivia holds the foremost position as a bismuth producer, and Peru has recently developed an excellent deposit. Australia is the only competing country of importance. In Bolivia the bismuth ores are found in association with the tin ores and are usually obtained as a by-product. On this account they are produced at small expense, and so long as the tin mines of the country continue to be worked there seems to be little doubt but that Bolivia will control the world's markets. The mines producing bismuth are spread over an extensive region in the high Andes and intermontane plateaus. The Peruvian deposit near Cerro de Pasco is unique in that no other economic minerals of



THE BORAX INDUSTRY.

Borax is found in quantities in the United States, Chile, Argentina, Bolivia, and Peru. The upper picture shows Mount Ollague, on the Chilean-Bolivian border. Some of the borax found in this region probably came from the volcanic gases emitted from this volcano. Center picture: A nitrate and iodine refining establishment. Lower picture: Borax refining establishment on Lake Ascotan, Chile.

importance occur in association. A considerably increased production could be made in both Bolivia and Peru if conditions warranted.

The world situation in regard to sulphur is an extremely interesting one. For several generations Sicily controlled the world's markets in spite of the fact that sulphur deposits are known in various parts of the world. This position was maintained until about 15 years ago, when a method of melting sulphur in the ground and pumping it out was put into use in the United States. This method yielded sulphur at such a low cost that the control quickly passed to the United States, where it remains. The first sulphur mines, or rather wells, were put down in Louisiana, and recent operations have been started in Texas. Other undeveloped deposits have been discovered. Under normal conditions it seems probable that the United States might supply the world with sulphur and practically close the Sicilian mines, although it is improbable and inadvisable that any attempt of this kind should be made.

The petroleum supplies of the world are so largely derived from the United States and Mexico up to the present time that these countries decidedly dominate and so control the markets. The first oil well ever drilled was put down in western Pennsylvania in 1859, and ever since the United States has led in oil production. Soon, however, the maximum output will be reached, after which a decline will come about. However, the present and prospective developments on both sides of the Andes in South America furnish promise of the control still remaining in the countries of the Western Hemisphere, even though the United States may lose its present leadership. In addition, enormous quantities of petroleum are locked up in the oil shales of the Rocky Mountains. These will undoubtedly become available before many years, so soon as more economical methods of distillation are devised or the increased cost of petroleum extraction enables this product to compete with the material pumped from the ground.

In the gem line the Americas furnish a great variety, but only a few of them are so different from the same varieties in other parts of the world that they are especially prized. The emeralds of the Muzo district, Colombia, and the topazes and amethysts of Brazil have won places for themselves in competition with similar stones of other countries and have an important part in supplying the demands for these gems. There are also others that might be mentioned except for lack of space.

Colombia has furnished beautiful deep green emeralds ever since the sixteenth century, and although the mines have not been in operation for several years, they are not exhausted and will doubtless continue to contribute to the world's supply. The deposits are under the control of the Government and leased to the operators.



CARNOTITE AND VANADIUM ORE IN PARADOX VALLEY, COLO.

Upper picture: A four-foot stratum of carnotite and vanadium ore between the points marked by the hat and the spade blade. Lower picture: Another picture of a stratum of carnotite and vanadium ore.

AVIATION IN THE UNITED STATES¹

PERHAPS in no field of enterprise developed under the stimulus of the European war have such advances been made as in that of aviation. While still in its experimental stage at the beginning of this deadly international struggle, the possibilities of the aeroplane as an instrument of war were quickly realized by all the belligerent nations, and hence there was started an almost feverish activity in Europe to develop the science of flying. The military element in some of the countries had foreseen the struggle for the mastery of the air, and when the war began were much better prepared to meet the demands for certain types of machines especially adapted to war purposes than were other countries where the peaceful uses of aviation had been the main consideration.

In the United States, the birthplace of the heavier-than-air machine, apparently far removed from even the possibilities of a serious war, the Government had given but little attention to this phase of usefulness of an American discovery, and it was only after the country became directly involved in the struggle that its genius for invention and powers of mechanical production were brought into play. During the short time that has elapsed since actual participation in the war called forth special effort, the development of aviation in this country has been remarkable. While it is true that the United States did not develop the small, single-seat fighting planes needed in scouting, pursuit, and other special war uses, the fact is that it did develop the larger types of airplanes, which are now found fit for commercial as well as for war purposes. In short, the achievements of the United States in aviation are many and varied, and perhaps a brief review of these will not be without interest.

Fifteen years ago the first successful flight was made in a heavier-than-air machine by Wilbur Wright, and a few years later, in 1908, the first public flights of the Wright Brothers were witnessed near the city of Washington, D. C. Great public interest was manifested in this realization of the dream of the ages, the President and Members of Congress being frequently present whenever a flight was in prospect.

The flights were successful, all Government tests were passed, and the first machine was actually purchased by the Government. And then, strange as it may seem, interest in flying on the part of the Government practically ceased, for during the following eight years

¹ Fly Capt. Max L. McLaughlin, Reserve Military Aviator, Air Service, U. S. Army.

the entire appropriations by the United States for military aeronautics, amounted to less than \$1,000,000.

The nations of Europe, on the contrary, in their quest for military advantage, quickly saw the value of what had happened near Washington, and France, in particular, during the years following, was responsible for the principal advances in construction and design of airplanes.

Thus it happened that when war was declared the United States found itself with but a handful of fliers and very few training planes. There was no aviation industry in the country and only a very few professional men trained as aeronautical engineers and designers. In this respect the problem of developing the air program for military purposes was unique, as, with the exception of a few men, there was no one in the whole country with experience in the designing or building of even the simplest training planes.

The progress made by the United States during the year and a half of war, the difficulties overcome, and the actual accomplishment in the realm of invention, design, and manufacture is something which to be appreciated needs only to be known. It will, perhaps, be interesting to consider briefly the development of aviation and the production of aviation material in the United States during this period.

National interest and national determination are shown frequently by the appropriations voted by Governments for any given object. One month after the Nation found itself at war \$10,000,000 was appropriated by Congress for the expenses of the air program. This was followed by an appropriation of over \$30,000,000, and a month later, July, 1917, by the largest appropriation ever put through Congress for one specific purpose—\$640,000,000. These large sums of money, combined with the inventive genius, the ability for quantity production, and the intelligence and adaptability of skilled labor of the country, explains the rapid development of the air service and the building up of an airplane industry of truly large proportions.

When the United States entered the war the personnel of the air service consisted of 65 officers and 1,120 men. When the armistice was signed the total strength was slightly over 190,000, comprising about 20,000 commissioned officers, over 6,000 cadets under training, and 164,000 enlisted men. In addition to the cadets under training the flying personnel was composed of about 11,000 officers, of whom approximately 42 per cent were with the Expeditionary Force when hostilities ceased. The air service constituted slightly over 5 per cent of the total strength of the Army. More than 10,000 fliers have been trained in this country since its entrance into the war. Students have flown more than 950,000 hours, which is the equivalent of 67,000,000 miles, and with a record of fatal accidents astonishingly few. The monthly average in the United States has been 1



Courtesy of United States Air Service.

THE LOENING MONOPLANE, TWO-SEATER FIGHTER.

The Loening Monoplane is noted for its strength of construction, speed, and great climbing ability. Note the machine gun mounted in the gunner's cockpit.

fatality for each 2,725 hours flown—a percentage shown by statistics to be lower than that of any other of the allied countries.

THE LIBERTY MOTOR.

In the realm of invention, design, and rapid production on a large scale the Liberty aircraft engine holds first place in the records of the air program. Maj. Gen. George O. Squier, chief signal officer of the Army, gave in an address before the American Institute of Electrical Engineers in New York City many interesting facts and figures on aeronautics in the United States at the signing of the armistice. He says:

As we look back on the record of accomplishment in the problem of obtaining large numbers of high-powered aviation engines for our Army and Navy air services, both in this country and abroad, it seems to those of us who were in close contact with the work and the difficulties more like a fairy tale than the statement of hard facts, which it is in reality. On the face of things it certainly would seem to be the height of presumption to assume that this country could, following its almost total neglect of aviation development in previous years, hope to design, develop, and produce in unprecedented quantities an acceptable aircraft engine of greater power than had yet been evolved by any of the European nations, even under their spurs of governmental encouragement and tremendous war demands. Yet just that and nothing else was the only thing to do, and the story of its doing is one of the most brilliant chapters in the history of our country's part in the great war. * * *

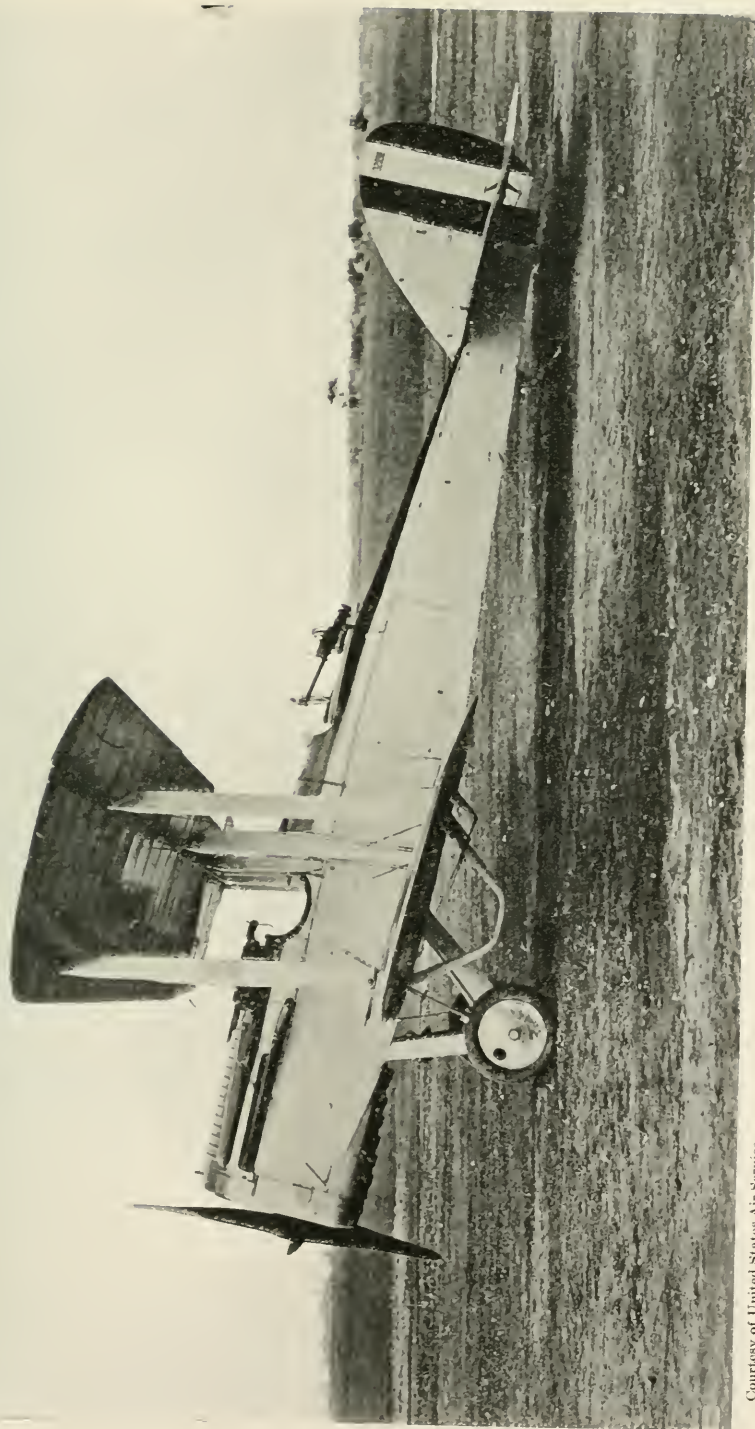
So well recognized did the value of the Liberty engine become that the Allies had on order at the time of signing the armistice 16,741 Liberty engines, and were constantly endeavoring each to increase their rate of monthly delivery. Airplanes were being designed around this engine in all allied countries, and it was fast becoming the predominating aeronautical engine of the allied cause.

It is of interest in this connection to note that this standardized engine already has been tested in the 24-cylinder model, and showed results which will prove that the original basic idea will provide for engines of any size which would have been required for any probable increase in airplane size during years of continuation of the war. The 16-cylinder was also proved by the success of the larger engine.

More than 16,000 Liberty engines were produced in the calendar year 1918. To June 15, 1919, more than 20,000 Liberty engines were produced, equivalent to 8,000,000 brake horsepower.

PRODUCTION OF SERVICE PLANES.

Shortly after the declaration of war a commission was sent abroad to select types of foreign service planes to be put into production in this country. We were confronted with the necessity of redesigning these models to take the Liberty motor, as foreign engine production was insufficient to meet the great demands of the Allies. The first successful type of plane to come into quantity production was a modification of the British DeHaviland 4—an observation and day bombing plane. The first deliveries were made in February, 1918. In May production began to increase rapidly, and by October a



Courtesy of United States Air Service.

THE DEHAVILLAND 4.

The DeHaviland 4, a British plane, was redesigned for the Liberty aircraft motor and used for fighting and bombing operations. It combines high speed with weight-carrying ability.

monthly output of 1,200 had been reached. Approximately 1,900 were shipped to the Expeditionary Force prior to the termination of hostilities.

On November 11, 1918, there had been developed, tested, and adopted by the United States Army four airplanes on which quantity production would have started early in 1919. They were the Lepere, equipped with the Liberty engine; the United States DeHaviland 9-A, designed for and equipped with the Liberty engine; the Martin Bomber, equipped with two Liberty engines; and the Loening two-seater fighter, equipped with the 300 horsepower Hispano-Suiza engine, also being turned out in quantities.

To turn out the vast number of engines and planes shipped overseas an industrial army of some 350 firms and corporations, employing more than 200,000 men and women, was organized. Existing airplane and motor factories were greatly enlarged and new factories of enormous size built and equipped with the best of machinery and appliances. Some of these facilities will no doubt be used in peace times for other things, but a large number will continue to manufacture planes and aeronautical supplies to meet the demands of the air service and the commercial development of aerial navigation.

IN THE FIELD OF RESEARCH.

Helium.—Many achievements were scored in the research field. Chemists of the United States worked out a commercially practicable method of obtaining noninflammable helium gas for balloons and airships, thus placing these lighter-than-air craft on a more equal footing with the airplane type. Maj. Gen. Squier says:

One of the greatest achievements of the present war from a technical standpoint is the production of helium in balloon quantities. This gas is noninflammable and has about 92 per cent of the buoyant effect of hydrogen. Its name is due to its having been discovered in the sun's atmosphere, through a characteristic line in the solar spectrum, before its presence on the earth or any of its properties were known. Its prewar scarcity may be appreciated from the fact that up to two years ago not more than 100 cubic feet ever had been obtained, and the usual selling price was about \$1,700 a cubic foot. Thanks partly to the unusually rich sources of supply in this country, and partly to the skill of the two commercial companies whose services were enlisted, and to the enthusiasm of the Bureau of Mines staff and of Mr. Carter, of the Navy, who for a time represented the Army as well in the project, such success was achieved that, at the cessation of hostilities, there was compressed and on the dock ready for floating 147,000 cubic feet of nearly pure helium, and plants were under construction to give at least 50,000 cubic feet a day at an estimated cost of not more than 10 cents a cubic foot.

The production of a balloon gas that assures safety from fire opens up a new era for the dirigible balloon. In November, 1917, a Zeppelin made the trip from Bulgaria to German East Africa with 25 tons of medicines and munitions only to find that the German forces already had been dispersed, and returned safely to its base without landing. With a noninflammable gas, not only comfortable and expeditious but also safe, transcontinental and trans-Atlantic travel in dirigibles will, it is believed, soon be commonplace.



Courtesy of United States Air Service.

THE CURTIS AEROPLANE FACTORY, BUFFALO, N. Y.

The Curtiss Aeroplane Co. is one of the largest manufacturers of airplane and aviation equipment. It employs thousands of skilled workmen.

Airplane fabrics.—As early as January, 1916, the Bureau of Standards started investigating the possibilities of substituting cotton for linen airplane fabric, and found that the general consensus of opinion among manufacturers and investigators here and abroad was that cotton fabric could not be used for wing coverings. Their difficulties were due to the fact that they attempted to substitute structure of fabric rather than physical properties. The linen fiber has radically different properties from the cotton fiber, and the only hope for successful cotton airplane fabrics was so to change their structure that the ultimate fabric had the same properties as the linen fabric.

The investigation was confined to the study of stresses and stress distribution in fabrics, together with the factors covering the properties of cotton fabric as related to wing covering. This phase of cotton manufacturing was an entirely new one, and great difficulty was experienced in studying the manufacture from a new angle, on account of the limited time available.

The grade A cotton fabric now being supplied to the air service compares favorably with the linen regarding weight, has a much higher factor of safety, a greater tear resistance, and dopes up to satisfactory tautness. The life of any fabric is dependent entirely upon the life of the dope, and therefore the cotton has as long a life as the linen. The English Government became concerned about its linen supply, and also adopted the fabric designed by the bureau. As a result of more recent investigations by the Bureau of Standards, another distinct fabric has been evolved which is 25 per cent lighter than any linen fabric now in use and is materially stronger.

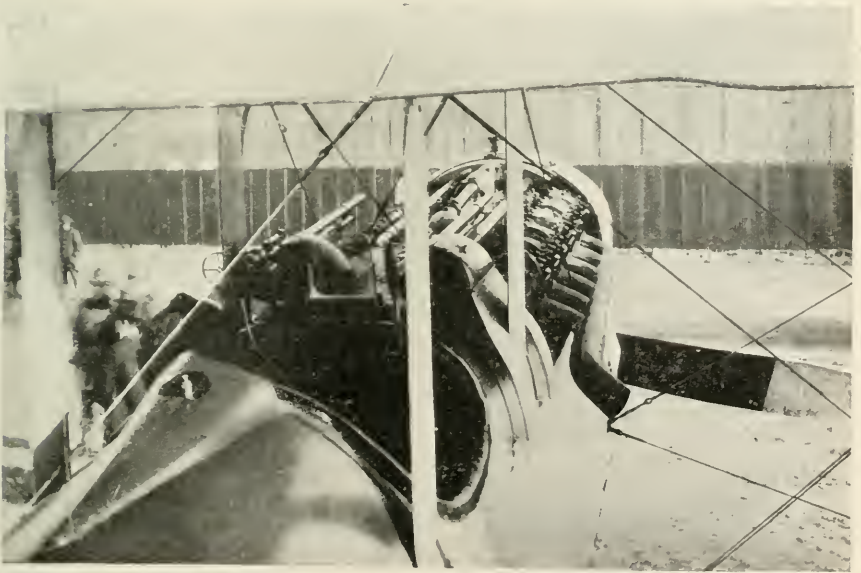
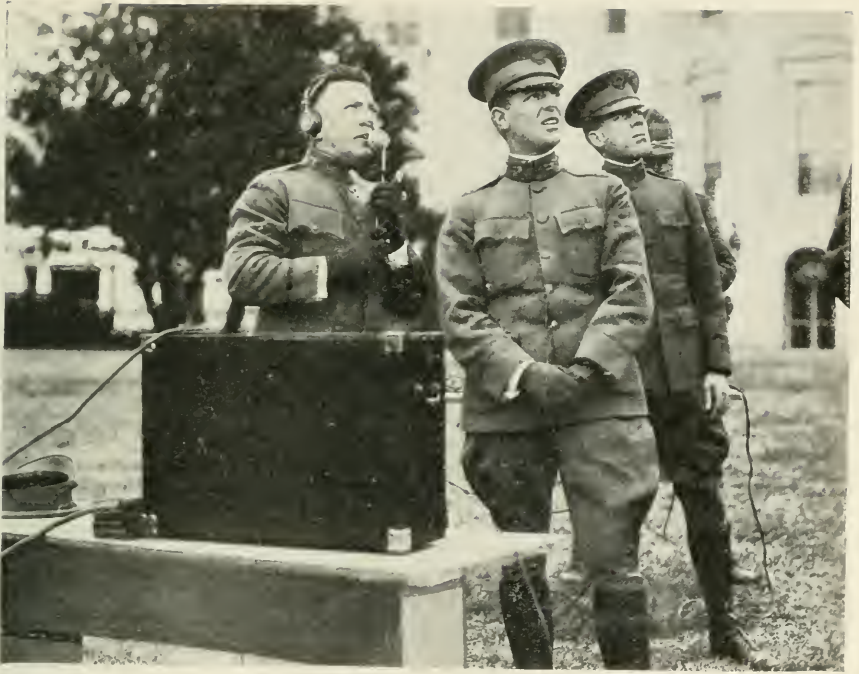
Inventions.—The Science and Research Division of the Signal Corps accomplished many things of interest and value to aviation, a few of which may be mentioned here.

A telescopic signaling device was developed, using a 6-volt, 2-ampere lamp. It has made possible light signaling in broad daylight over a distance of 18 miles.

Secret signaling at night, with the aid of ultra-violet light, was perfected. With simple signaling telescopes of the sort mentioned above, using only a 6-volt, 2-ampere lamp, secret signals have easily been sent 6 miles. New means of adapting this method to the problems of signaling to airplanes and secret signaling between convoys were developed. This device will be of much use in peace as well as in times of war.

Propaganda balloons have been produced which have a range of more than 1,000 miles. This is an accomplishment which is invaluable to the future development of aviation, particularly with reference to trans-Atlantic flights whether in peace or in war.

Means for navigating airplanes with the aid of the sextant and artificial horizon have also been developed, as have also means of



Courtesy of United States Air Service.

MODERN INVENTIONS IN AVIATION.

A long step forward in aviation was taken when the airplane radio telephone apparatus was invented. The upper picture shows Col. Culver, to whom a great deal of credit must be given for the perfection of this apparatus, talking with aviators hundreds of feet in the air. By this means it is possible to direct the movements of the airmen according to the wish of the commanding officer on the ground. Lower picture: The Liberty aircraft motor and the pilot's cockpit.

speedy reduction of observations, so that an observer in a plane can locate himself with an average error of not more than 10 nautical miles within five minutes after he makes his observation. This will be of great value in long flights.

A bomb-sight stabilizer has been perfected which reduces the main error now made in bombing—namely, the error in the determination of the vertical—by more than threefold. When it is remembered that a threefold increase in the accuracy of bombing is equivalent to the multiplication by three of the production of bombing planes, the importance of a device of this kind is readily seen.

VOICE-CONTROLLED FLYING.

Probably the most spectacular development has been the invention and perfection of the airplane radio telephone apparatus, by means of which the human voice can be used to communicate between the airplanes in flight and over long distances and from airplanes to the ground. The comparatively recent perfection of this device is the only reason why they were not more generally used in the operation of the western front in France.

In the advanced flying schools of the United States a special course of instruction was given in this voice-controlled, or voice-commanded (commonly called V-C) flying. In this work the leader of a formation keeps in constant touch with each member of his party and directs movements and evolutions either of one plane or of the whole formation, whether they be near by or at a distance of several miles away. The leader is in touch also with the ground and can talk at will and receive messages from headquarters.

Airplane telephone set.—Prior to April, 1917, a few experiments had been made, in which speech had been transmitted from airplane to ground by radio methods, but the apparatus involved was hopelessly crude. The present airplane radiophone, therefore, is the result of a period of intensive development work, begun shortly after we entered the war. Speech was exchanged between airplanes 25 miles apart in October, and sample sets were sent at once to the Army in France for trial. Several thousand sets were ordered and have been completed and distributed to flying fields here and to the air service in France.

The satisfactory performance of this apparatus has resulted in a new type of military unit known as the voice-commanded squadron, mentioned above. The commander of an air fleet now directs the movements of the individual units in any manner desired; the effectiveness of the squadron as a military machine is thereby enormously increased.

Other uses are in communicating information from airplanes to ground stations, and in directing one or more airplanes from a ground



LE PRIE TWO-SEATER FIGHTER.

This plane is driven by a Liberty motor of 400 horsepower. It is an exceedingly fast plane, climbs rapidly to high altitudes, and is easily and quickly maneuvered. It is superior

as an advanced training plane.

station. Innumerable applications will be evolved as the possibilities are realized.

The essential elements of the airplane radiophone are the power equipment, the radio equipment, and the antenna. The operation of the sets is extremely simple, all adjustments being made before leaving the ground. The only manipulation required of the aviator is that of the change-over switch to change from talking to listening.

THE AIRPLANE DIRECTION FINDER.

One of the principal problems of airplane navigation has been the evolution of a suitable compass, particularly for night bombing work. Magnetic gyroscopic compasses have limitations at present which make impossible reliable air navigation by dead reckoning.

The use of directional effects of loops or coils for receiving radio signals have resulted in the development of a radio compass for airplanes which give positive information to the aerial navigator, and enables him either to locate his position by triangulation with respect to two beacon land stations, or to fly at any given angle with respect to a certain beacon station.

The precision of the directional effect is remarkable. In fact, the radio direction finder may well be called a radio eye, by which the aerial navigator sees one or more radio lighthouses which are sending identifying signals to guide him on his way. These lighthouses, furthermore, have certain advantages over the normal lighthouse in that their ranges may be much greater, and they are not invisible in the daytime nor obscured by fog and mist.

The remarkable advances made during the last 18 months have resulted in the application of radio communication to practically every phase of military aviation. Commercial and military possibilities have, however, hardly been touched as yet. It is believed that radio apparatus soon will be as essential on aircraft as it now is on ocean-going steamships, and that its use will enormously increase the effectiveness of aircraft for all purposes, either of war or peace.

The fact that the United States depended on Europe for its strictly combat planes during the war may some day be referred to as an argument in favor of the superiority of this country in matters aeronautical; for, instead of specializing on a type of plane useful only in war, emphasis was placed on the development of the larger types of planes, which now with few modifications are proving of great value in the broader field of endeavor—that of commercial aviation.

THE FUTURE.

Great as have been the accomplishments in the realm of aviation during the war, far greater and more useful achievements are still ahead in the days of peace, now happily at hand. The apparently



Courtesy of United States Air Service.

THE MARTIN TWIN-ENGINE BOMBER.

The Martin twin-engine bomber embodies new principles of airplane design and construction. It is one of the promising new types now being manufactured in the United States.

impossible has been accomplished, and will continue to be again. No one can foresee the tremendous development of commercial aviation in peace times, but we know that it will be both great and varied and that the United States will contribute its full share to the conquests of the air.

Brig. Gen. William Mitchell of the United States Air Service, has well said:

America is a nation of initiative and has many men with inventive minds. This much is established from either an economic or a military standpoint, that henceforth, whoever holds the mastery and supremacy of the air will hold the supremacy and mastery of all the elements—namely, the air, the land, and the water. If we are to hold the mastery of the land and sea, we must master the air as well. The United States must organize to lead in aerial development, so that the country that invented the airplane may also be a leader in its expansion and use.

The United States has built up a large new industry in the manufacture of airplanes and airplane material. Large factories are now turning their attention to the commercial needs of aviation. This country will not only be able to supply its own needs, but also, with its schools, its flying fields, and its manufacturing establishments, will encourage and aid the development of this new science in our sister Republics in Latin America.

COMBINING ART AND MUSEUM EXHIBITS¹

IN the American Museum of Natural History, of New York City, there are some superb examples of present-day methods of portraying animal habitats, and these exhibits have been there for a comparatively long time, perhaps 16 or 17 years, so that many, many people have seen them and are familiar with them. On the other hand, there are several millions of our inhabitants who have never so much as heard of these unique exhibits. They are extraordinary productions, most of these "groups," and in many instances produce a picture upon the mind of the beholder which is not easily effaced in a lifetime.

First, the technique of what is here to be described, and further on the professional requirements of the artist and the taxidermist, will be touched upon.

To build up one of these elaborate pieces the artist will need to have at hand everything in the way of pigments, brushes, easel, and so on, that he customarily employs in his professional work

¹ By Dr. R. W. Shufeldt, Washington, D. C.



REPRODUCTION OF A SCENE IN THE CALUMET LAKE, RIVER, AND DUNE REGION, NEAR CHICAGO, ILL.

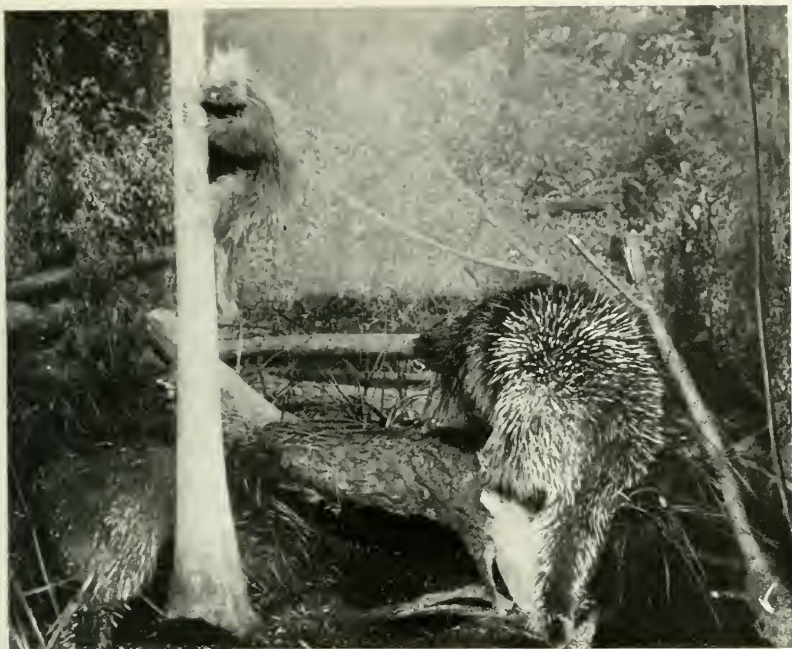
This scene represents a section of the Calumet River, lake, and dune region as it appeared 40 years ago, with the various species of mammals, birds, and reptiles that were to be seen there. The scene has changed since then to one of tall buildings, busy streets, and elevated railways.

when about to undertake the production of a high-class work of art. Now, as an example of this kind of exhibits, we may select the splendid marsh scene on the Calumet River, which is one of the most attractive of the series here presented. As a rule, the artist precedes the taxidermist in the task they are to complete together; and prior to commencing his part of it, he must thoroughly inform himself in regard to what is to be accomplished. Moreover, he must be fully in touch with what the taxidermist has to achieve.

First the sky and distant view are to be portrayed on the background of the recess in which the group and the locality is to be reproduced. Here the artist may be greatly assisted through the use of photographs of the actual scene in nature, or a scene closely simulating it. Next follows the painting of the middle distance, which must be done with a full realization of all that is to constitute the actual foreground. The painting for the whole scene must be brought down, over the entire surface of the exhibit, to a plane where the taxidermist may commence to work in his "accessories" and the joining with this picture, in order that the latter may not be easily detected or the deception revealed.

The painting of the artist may be to bring the scene, as a whole, down to the foreground at one or more places, or it may not pass the middle distance, it being left to the taxidermist to fill in all of the foreground. For example, if a forest of big trees is to be represented, the artist will not only paint the entire view in the distance through the trees, but he will carry the latter down to the middle distance—even almost to the foreground—when his coworker will at that point introduce the trunks of the real trees and their immediate surroundings into the foreground, posing the mounted animals that are to occur there.

Some of the representations may be comparatively simple, as, for example, a rolling prairie scene, composed as a setting for a dozen antelope or so. Here the artist may have to paint only the distant sky and low, undulating hills of the middle distance; while the taxidermist would, from that area, bring down to the foreground an actual model of a grassy hill and all that might occur upon it, to the very feet of the observer. Upon this his mounted antelope would be posed. On the distant and mid-foreground hills the artist can effectively paint in the animals at the supposed distances from the observer. But the joining of the artist's and the taxidermist's work may be far more complicated than this; very much more material, too, may be required in the way of accessories. It will be noted, in the scene referred to in a previous paragraph, that an actual marsh must be faithfully reproduced in the foreground by the taxidermist, and the artist must match this up with his painting in the rear—and that on a flat surface. In this foreground not only must water be introduced, but mud, rocks, a great variety of aquatic plants and other objects,



MUSEUM GROUPS.

The porcupines and the fox are stuffed animals, but so naturally posed by the taxidermist that they seem alive in their natural habitat. The snow and tree branches are artificial, while the background is supplied by the artist. These exhibits are so constructed that they will probably show no depreciation after a full century has elapsed.

birds' nests in situ, brush and bramble at the marsh's edge, stumps—indeed, anything and everything that one may find in a real marsh in nature. Half a dozen or more aquatic animals of the region, inhabiting such a locality, may be effectively introduced; for instance, a pond turtle or two, a water snake, a muskrat, dragon flies on the reed, and the rest.

Rocks, reeds, old stumps, or logs may be collected in nature and introduced bodily into the scene; whereas water, mud, marsh mire, and similar accessories must be represented through the skillful use of glass, actual earth or earthy materials, and so on. Glistening snow is represented by powdered white glass and some other compositions. All the animals are, of course, carefully mounted specimens, and given the necessary poses or attitudes they assume in the localities represented.

The artist may bring down into the foreground such a marsh; for example, painting natural size the water, mire, reeds and bramble, rocks and stumps, where the taxidermist leaves off. For instance, some old stump may, in part—that is, the part toward the beholder—be real; while where it is sawn off, so as to be placed against the flat surface of the rear of the case, the artist joins it, painting the rest of the stump in his scene. Sometimes the effect of such an artifice is truly marvelous. One must study the combined result with unusually close scrutiny to be sure where the artist left off and the taxidermist accurately matched him up with his more or less real material.

Many similar illusions can be successfully managed in such combinations. For example, the scene may be a heronry in a timbered swamp, with scores of birds in their characteristic attitudes of flight and repose. Where the artist comes into the foreground as far as he safely can, some of the nests, trees, hanging moss, and all the rest, is at the plane of mergence—in part painted, in part the real object. This is sometimes carried so far that a bird may be divided in the vertical plane, and the half brought against the surface of the rear of the case, where the artist works in the surroundings with his brush and the taxidermist brings it toward the foreground with his materials. When all this is skillfully handled it becomes more than difficult to discern, at a little distance, where one worker left off and the other began.

Many things are to be gained through exhibiting mounted specimens in museums in this manner, and it admits of the application of both art and taxidermy of the very highest order. Indeed, unless landscape artists and animal painters of this very class are engaged to undertake the artistic side of the work, and this seconded by the very finest experts in taxidermy, the final result can but prove to be an utter and miserable failure. Again, should the artist not perform his share of the task creditably; should his views, skies, and scenery fall to the level of mediocrity, it can have but the one effect of de-



REPRODUCTION OF ANIMAL GROUPS.

The taxidermist and the artist attempt to reproduce nature faultlessly in every detail. When one stands a short distance away and gazes intently at the exhibit the impression is that of being right on the ground. The trees and branches in the above groups are arranged by the taxidermist exactly as they appear in the forest, but it remains for the artist to give them their realistic background.

preciating the labors of the taxidermist, however well the latter may have reproduced nature in the matter of the attitudes he has given the various forms he has preserved, or such of the foreground accessories as he has introduced, such as woods, streams, marshland, or mountain side.

When it is fully understood what the artist has before him, professionally, in work of the class here required, it is quickly realized that the talent he possesses must be far above the usual standards. In the first place, he is called upon to paint a picture on a very limited surface—sometimes a general concaved one—which, when completed, will not only be in thorough harmony with the animals introduced by the taxidermist, using the word animals in its broad zoological sense, including all living forms, but his scenic effects must repeat the region represented in all particulars. In regarding it one must feel the heat of the tropical forest, the breath of the snow-covered prairie, or the desolation of the desert, as the case may be. Not only this, but the artist must possess the peculiar skill of bringing his painting down to the foreground, in that it may merge naturally with what the taxidermist has there introduced. For instance, the scene to be represented may be the home of our big prairie grouse—the sage cock or “cock of the plains.” This would require the clear blue sky of that western country, a few turkey buzzards sailing overhead in the distance, and the Big Horn Mountains forming the far-off background, but so handled as to give the observer the impression that the foreground forms their natural extension toward the beholder. This extension, the work of the taxidermist, should faithfully reproduce the typical western prairie, with its sage brush and cactus, its dusty surface, and, withal, its barrenness. If the breadth and depth of the scene admit of it, a rattlesnake, a buffalo skull, and one of the smaller prairie rodents may be naturally introduced.

When such a group as this is completed through the combined skill of the artists who made it; when nature has been faultlessly reproduced in every detail, it is truly remarkable how realistic is the effect. When one stands a short distance away and intently gazes into it for a little while, the impression is that of being right on the ground, rather than that of contemplating a scene which may not occupy more space than the requisite number of feet to contain it in width, height, and depth, which does not average above 6 by 10.

Many of those who read this article may be familiar with the magnificent flamingo group in the American Museum of Natural History. When correctly viewed from the proper distance, this assemblage of our red flamingoes on their breeding grounds would appear to contain several hundred mounted specimens, whereas only comparatively few of them are thus prepared for the foreground; those in the background are the work of the painter. Here the atmospheric effects are truly wonderful; and, after steadily gazing



COMBINING THE WORK OF THE TAXIDERMIST AND THE ARTIST.

This group is so arranged that the whole looks real and tangible. It is a surprise to learn that the bottom part of the picture is the work of the taxidermist and the upper part painted by the museum artist. The bird hovering above is suspended by an invisible wire in such a way that it appears about to swoop and seize the animal in the water.

upon the scene for a few moments, it is by no means difficult for the observer to imagine himself on the shore of one of the Bahama Keys, when flamingoes bred there in thousands, with the actual scene before him. The merging of what has been accomplished with the palette and brush with the skillful work of the taxidermist is well nigh perfect.

Many of these combinations are most clever, especially in the matter of uniting the painted distance with what is tangible in the foreground. In the Chicago Academy of Sciences where he is curator, Mr. Frank M. Woodruff has now in the course of completion—if the task has not already been performed—a most ambitious display of this character. Recently he has been so good as to send me a beautiful series of photographs of the various groups in that extensive exhibit, and several of these are here reproduced, in order that some idea may be formed of the character of such presentations. Two of these pictures complement each other—that is, the left-hand margin of the one with the ducks in the marsh unites with the right-hand margin of the one wherein appears the osprey hovering over the swimming muskrat. As thus joined they present a part of the Calumet Lake, river, and dune region in the environs of the city of Chicago. It represents that section as it appeared 40 years ago, with the various species of mammals, birds, and reptiles that were to be seen there.

These photographs really tell their own story, especially after what has been set forth above with respect to the way in which such groups are built up. In the one in which the ducks appear note how beautifully the artist's work merges with that of the taxidermist—that is, the marsh in the foreground. And then to think that this very exhibit is so skillfully prepared that it will probably present no depreciation after the passing of a full century of time; and it is just possible that after the lapse of some such time this section may be all built up by man in bricks and stone. When that day arrives, then, indeed, will these Calumet River scenes with their faunal inhabitants be studied by the naturalists and others of the generations to come.

A word as to the dimensions of these groups in the Chicago Academy of Sciences and other points with respect to the exhibit. On the 14th of January, 1919, Mr. Woodruff wrote me to the effect that he had at last "photographed" the series in situ, and that he had met with great difficulty in finding a lens that would cut the depth of the room. "We have a limited space for our exhibits," he says, "and when you see the 110 groups, each with a curved background 11 feet by 5, you can hardly realize the enormous saving of space. At the end of the hall and the long center series of groups you will notice a small exhibit facing you, which is really a part of our large 76-foot group that is placed around the walls of the room, and that is the scene on the Calumet River with the

flying wood duck that I sent you some time ago. In the space between the lower and upper series of groups is a large sky effect, and all of our raptures, ducks, geese, etc., are mounted in pairs and flocks, showing the wing markings and shapes, which the old style of standing birds does not show."

To install exhibits of this character naturally requires a very considerable financial outlay. The remarkable groups in the Chicago Academy were made possible through the active support and generous personal donations of Mr. La Verne W. Noyes, president of the academy. The results, however, have more than justified the expense, for the groups have been inspected by some of our best known naturalists, and the general consensus of opinion is that they are exceptionally good and above adverse criticism. Exhibits such as these lend themselves especially to the reproduction of the environs of rapidly growing cities in locations where these environs are particularly varied and interesting. For example, had such groups been prepared years ago of Manhattan Island above Fiftieth Street, forming a part of some exhibit in a present-day museum capable of doing it justice, what an attraction it would now offer the museum goers of this generation.

About 15 years ago I saw a snapping turtle—and a pretty big one—cross the dusty road at Broadway and One hundred and sixtieth Street. On the right-hand side of the road some stone quarrying was going on, and a bit of cat-tail marsh had been left undisturbed there. Our snapper evidently thought that this, too, was soon to be invaded, hence its attempt to reach safer territory. In that cat-tail marsh one solitary pair of red-wing blackbirds had nested, and in the ditch near at hand I dipped out with a hand net as many little killifish as I needed for one of my aquariums. When I was a boy all of that section was in timber, which began at about Sixtieth Street, and I can remember when the now extinct wild passenger pigeons came there in tens of thousands to roost. There were many fine artists in those days that could have painted such scenes, but taxidermy had at that time by no means arrived on the plane of an art, as in these days. John G. Bell was then the great New York City taxidermist; he had just begun to mount birds in conventional attitudes on manufactured limbs, in that from a dozen to 50 might appear in one case.

When I first came to Washington in 1864, during Lincoln's administration, the whole region below the Smithsonian Institution and from Georgetown to the branch was one big cat-tail swamp. Thousands of redwings nested there in the spring, and one met with no trouble in finding the nests of several species of rail, bittern, herons, marsh wrens, and various other birds. Muskrats bred there by the dozens; hundreds of gulls and terns hovered over the Poto-



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**SEÑOR DON SALVADOR SOL M, ENVOY EXTRAORDINARY AND MINISTER. PLENI-
POTENTIARY OF THE REPUBLIC OF SALVADOR IN WASHINGTON.**

The recently appointed minister of Salvador to the United States was officially received May 3 of this year. Señor Sol was born in the city of Santa Tecla in 1877. In 1888 he came to the United States, enrolling in Crawford's Polytechnic School of Oakland, Calif., and concluding his preparatory studies in Hoyt's School in San Mateo. Later he studied engineering in the Vauder Naillen Engineering School. In 1894 he entered the political life of his country, returning later to the United States, but going back to Salvador to oversee his coffee plantations. At the close of the Escalona administration he reentered politics, and was active in the campaign through which President Barahona's election was effected, from which time he has been one of the most prominent figures in the public life of the country. For several years he was consul ad honorem of Venezuela in Salvador. He has traveled extensively and devoted particular attention to the political and economic organization of the United States, in which country he has formed many sincere friendships.

mac, while the bald-head eagles and ospreys built just on the other side in Virginia. What a bird and mammal group that would have made for the present National Museum. But, then, there were no hand cameras in those days with which to take those scenes, and the old daguerotypes were never used for such purposes.



AGRICULTURE, INDUSTRY AND COMMERCE

ARGENTINA.

According to *La Nación*, a daily newspaper of Buenos Aires, information received at Rosario from New York, is to the effect that United States shipowners hesitate to send their vessels to Rosario because they have erroneously been led to believe that the Parana River is not deep enough to permit the ascension of large vessels to Rosario. Due to this mistaken impression some United States vessels prefer to unload in Buenos Aires and Montevideo. That ocean steamers can easily NAVIGATE THE PARANA RIVER is shown, according to the newspaper referred to, by consulting the official bulletin of the Parana River Commission, which shows that the depth of water varies from 29 to 34 feet. Even in the periods in which the river is not swollen there is more than sufficient depth to accommodate ships of the deepest draft as far as Rosario. Captains of United States vessels which have gone to Rosario to load wheat will confirm this statement.

The consul general of the Argentine Republic in Mexico has reported to the Argentine Government that, for the purpose of developing COMMERCE between the two countries, he has published in the Mexican newspapers a comparative table showing the merchandise now imported into Argentina which could be replaced by similar Mexican products. Basing his calculations on Argentine statistics for 1916, the consul general estimates that Mexico could send to his country goods valued at \$40,000,000 annually, which is the amount Argentina imported during that year of the following articles: Coffee in the grain, raw cotton, tobacco, twine or thread for sewing sacks, canvas, agave fiber, jute, naphtha, unrefined and crude petroleum, jute sacks, jute cloth, hemp, chick peas, nuts, and beans. He also believes that there are numerous articles which Argentina could send to Mexico, especially since the New York & Cuba Mail Steamship Co. is willing to transport freight from Buenos Aires to Mexican ports at the rate of \$30 per ton.

Official data show that the EXPORTS OF MEATS during the first two months of the present year increased considerably as compared with the same period of 1918. In February last these exports amounted to 188,353 frozen wethers and 512,845 quarters of frozen beef. The exports from January to February, 1919, consisted of 319,151 frozen wethers and 1,099,360 quarters of frozen beef.

The sanitary bureau and the board of public works have reported favorably upon the request of the NATIONAL PORTLAND CEMENT FACTORY of Cordoba to allow its cement to be used in the construction of Government works, and has also reported favorably upon the request of the Sierra Bayas Cement Co. to officially approve the cement manufactured by that concern.

According to the Bulletin of the Department of Agriculture, there are at present seven PAPER FACTORIES in operation in the Argentine Republic, four of which are in Buenos Aires, two in Santa Fe, and one in Cordoba. The capital invested in these factories aggregates 18,998,000 pesos, as follows: In buildings and grounds, 4,483,000; tools and machinery, 9,930,000, and in other values, 4,235,000. The paper output in kilos in 1916 and 1917 was, respectively, as follows: Wrapping paper, 13,162,605 and 5,293,231; news-print paper, 3,706,375 and 863,710; paper for books and works, 7,386,950 and 2,098,590; and paper for other uses, 14,585,804 and 2,547,807. The paper manufactured is of a fine grade, but recently considerable attention has been given to the making of news-print paper, inasmuch as, on account of the war, it was difficult to obtain an imported supply. The imports of news-print paper during the five years from 1907 to 1911 were 92,636,837 kilos, or an annual average of 18,527 metric tons. In the five-year period from 1912 to 1916, inclusive, the imports of print paper were 137,636,523 kilos, or an annual average of 27,527 metric tons.

Official statistics showing the production of MATE or Paraguayan tea in the Argentine Republic have just been published. In 1917 there were gathered from the Government tea fields in Misiones 1,095,499 kilos of this tea, and from the tea fields of private producers 1,500,000 kilos.

BOLIVIA.

According to a law of March 6, 1919, concerning the IMPORTATION OF FUEL, imports of coal, crude petroleum, wood, coke, anthracite coal, and similar products will be exempted from storage charges when they are forwarded within two days and not later returned to Government warehouses. Charges will also not be made against other articles imported for use on the railroad lines under construction in the country, the commodities being enumerated by the law of December 6, 1910, or complementary lists. The materials,

however, which are admitted free from federal or municipal taxes, to be employed by the railways already in operation, are not exempted from storage fees.

The following board of directors was elected for the term 1919-20 by a general meeting of the CHAMBER OF COMMERCE OF LA PAZ held late in March: President, Señor Guillermo Morris; vice president, Señor Moisés Ormachea; secretary, Señor J. Adolfo González; and treasurer, Señor Julio Alvarez.

The School of Arts and Crafts of Cochabamba has recently amplified the department of silk culture in an effort to encourage the SILKWORM INDUSTRY.

BRAZIL.

Numerous and extensive FORESTS are found in Brazil, the most important of which, due to the enormous lumber development of the last few years, are the pine forests. From 1910 to 1918 the exportation of Brazilian lumber has increased in a geometrical ratio, two-thirds of these exports consisting of Parana pine. According to data furnished by the Brazilian Bureau of Information the exports of lumber, which in 1910 were valued at 1,223 contos (gold conto = \$546.20), rose in 1918 to 179,799 tons, valued at 21,090 contos. In the two years referred to the exports of pine were, respectively, 2,422,178 kilos, valued at 150 contos, and 152,021,354 kilos, valued at 16,825 contos. The best markets for Brazilian pine are Uruguay and the Argentine Republic, to which countries there were exported in 1918, respectively, 49,341,057 and 102,680,279 kilos.

At the agricultural and industrial exposition held recently in Montevideo Brazilian manufactured products were awarded some of the best prizes. Brazilian manufacturers sent to that exposition woven goods, boots and shoes, perfumes, drugs, manufactured iron, dyes, cigars and cigarettes, and pottery. It is believed that the Argentine Republic, as well as Uruguay, will prove to be excellent markets for these products, some of which, such as fruits and preserves, sugar, coffee, enameled iron ware, glass, perfumery, and lumber already have a considerable demand there.

On March 11 last the official inauguration of the manufacture of STEEL by means of the Tropend furnace took place in the war arsenal at Rio de Janeiro. The steel produced at the first trial was of a superior quality and will be utilized in the manufacture of different pieces for ship construction.

During the first two months of the present year the EXPORTS from Rio de Janeiro aggregated 198,428 packages, valued at 9,254 contos. Among the principal articles exported were lard, flour, and cassava beans, valued, respectively, at 5,500, 510 and 530 contos.

The President of the Republic has been authorized by Congress to utilize during the present year the credits granted the department

of agriculture in 1918 to import STOCK FOR BREEDING PURPOSES. He has likewise been authorized to transport free over national and private transportation companies blooded animals for breeding purposes, as well as agricultural and industrial machinery, seeds, and fertilizers acquired by breeders and agriculturists.

The Executive has been authorized by congress to cede to the State of Rio Grande do Sul, or to stockmen's associations of said State as well as to companies that may so desire, the necessary lands which he may have at his disposal near the port of the City of Rio Grande for the establishment of PACKING HOUSES under such conditions as he may deem proper.

According to statistics recently published the COFFEE production in Brazil in 1917-18 amounted to 17,000,000 sacks, as compared with 22,000,000 sacks representing the world production during that year, which was the largest on record with the exception of the production of 1906-7 which amounted to 23,786,000 sacks, of which 20,190,000 represented the output of Brazil. The United States, where the average annual consumption is 10 pounds per capita, imported from Brazil in 1917-18 coffee aggregating 744,000,-000 pounds.

The cultivation of HOPS AND BARLEY, which were formerly imported from Europe for the manufacture of beer, is rapidly being developed in Brazil. Barley is being cultivated in increasing quantities in the State of Santa Catharina and in other southern States of the Republic, while recently its cultivation was begun in the State of Minas Geraes.

CHILE.

The Mercurio of Santiago, in its issue of March 27 last, publishes the observations of a Chilean gentleman, who has just returned from the United States, on the difficulties in the way of encouraging COMMERCE BETWEEN CHILE AND THE UNITED STATES. The statement is made that exports of United States merchandise to Chile are forwarded under extremely burdensome conditions which add enormously to the cost of the goods. For instance, a pair of shoes which sell in the United States for \$4.00 bring in Chile 50 pesos or more (paper peso = about 19 cents). Nearly all of the importing merchants fail to order direct from manufacturers in the United States, but, on the contrary, place their orders with United States commission houses which earn large profits on transactions with their South American customers. These commission houses receive orders, send them to the factories without stating for whom the goods are wanted, obtain the merchandise and forward same to Chile. The cost of the goods is further increased by adding railway freight to New York, and consular fees. The gentleman in question believes that this could be remedied if Chilean merchants would deal

direct with the factories, communicate with boards of trade of the United States, correspond with industrial sections in the central part of the country, make shipments through other ports nearer to Chile than the port of New York, as, for example, New Orleans, where merchandise could be sent to Chile without being subject to the increased freight rates caused by shipping it via New York, and especially by establishing new lines of steamers to ply between New Orleans and southern ports.

COLOMBIA.

According to official statistics, there are 1,305,469 CACAO TREES producing in the Province of Tumaco and 2,025 cultivators in use.

In the middle of April exploitation of certain SILVER, LEAD, AND ZINC MINES in the vicinity of Ubate, Department of Cundinamarca, was begun. The mines are the property of the Colombian Metallurgical Co.

The Atlantic Department Assembly has passed a law creating an AGRICULTURAL EXPERIMENT STATION and founding the Atlantic Agricultural Society.

On April 21, 1919, a 20-horsepower GASOLINE LAUNCH, to be used in mail service between the port of Vanadia and the town of Viento, on the Arauca River, was launched. It is the first gasoline boat to be employed on the river.

COSTA RICA.

The PUNTARENAS ICE CO. has been organized in that port with the purpose of manufacturing ice on a large scale. The enterprise is backed by prominent business men, agriculturalists, and manufacturers.

CUBA.

Señor Rafael Martínez Ibor has returned from the United States, where he went to establish a NEW LINE OF STEAMERS to ply between the United States, Cuba, and Central America. The vessels of the new line have been acquired by the Maritime Transportation Board of the United States and will sail under the flags of the United States and of Cuba. It is hoped that the maritime service of Cuba, temporarily interrupted during the war, will soon be completely reestablished. Among the lines which are now or soon will be operating may be included the Taya vessels, the ships of the Holland Steamship Co., and the Key West line.

Due to the enormous production of sugar, the manufacture of ALCOHOL from molasses promises to be one of the principal industries of the island. In the manufacture of a ton of sugar 40 gallons of molasses are produced, out of which 16 gallons of alcohol can be

distilled. As the present crop of sugar is estimated at 4,000,000 tons, the importance of this industry will be at once seen. A considerable part of Cuban molasses is exported, but at the present time steps are being taken to establish 10 new distilleries on the island in order to distill the alcohol from a larger quantity of the molasses produced. The exports of alcohol from Cuba during the last few years were as follows: In 1912, 200,518 gallons, valued at \$50,130; in 1913, 229,478 gallons, valued at \$52,871; in 1914, 173,941 gallons, valued at \$31,684; in 1915, 418,523 gallons, valued at \$193,053; and in 1916, 2,570,329 gallons, valued at \$1,800,535.

The Koninklijke Holland Lloyd Steamship Co. of Amsterdam have decided to establish a LINE OF VESSELS for the transportation of freight and passengers between Coruna and Habana.

WHEAT CULTIVATION has been undertaken in the Province of Camaguey. The present crop promises a good yield. The wheat sown is of the class known as buckwheat.

DOMINICAN REPUBLIC.

The Department of Fomento and Communications of the Dominican Government states that 16½ kilometers of MACADAM HIGHWAY between the city of Santo Domingo and Los Alcarrizos have been completed, as well as 50 kilometers of the road between Monte Cristy and Santiago. The macadam section of the national highway between La Vega and Moca is being built under contract and is expected to be completed by January 1, 1920. The section between Santiago and Navarrete, which is being constructed by the Government out of macadam and gravel, is expected to be completed by the close of the present year.

The Department of Posts and Telegraph advises that wireless COMMUNICATION is now available to the public between the city of Santo Domingo and Guantanamo, and by cable from the latter place to the United States.

The SOCIETY OF APICULTURISTS recently met in the city of Santo Domingo to discuss the needs of the beekeeping industry and to encourage measures tending to increase the production of honey in the Dominican Republic.

At a meeting of the stockholders of the Interior Packing Co., held in the city of Santo Domingo in April last, the name of the corporation was changed to MIDLAND PACKING CO.

ECUADOR.

On February 26, 1919, 64,000 sacks of CACAO, valued at over 4,000,000 sucres (sucre=\$0.4867 U. S. gold), were shipped on the Steamship *Suiderdizk* from Guayaquil for Havre. The ship was chartered by the Mercantile Bank of New York to receive the ship-

ment of 100,000 quintales, the largest and most valuable cargo of cacao that has ever been shipped from the port in one boat.

The Bulletin of the Chamber of Commerce and Agriculture of Guayaquil announces that during the month of March 4,660,819 kilos of CACAO were exported from that port, of which 1,736,609 were shipped through the agricultural association and 2,924,210 through individuals. Of the total amount shipped, 2,873,098 kilos were to go to New York and 381,937 to San Francisco, by which it is seen that the United States received more than three-fourths of the total exportation.

According to the report of the inspection superintendent of the CURARAY RAILWAY concerning the work carried out during the month of April, kilometers 34, 35, 36, 37, and 38 of the line have been embanked and are ready for the rails, 19,059 cubic centimeters of earth having been excavated during the month and four drainage culverts constructed. In February 19 trips were made over the line by the train, a total of 1,210 kilometers being traversed, and 600 tons of construction material were hauled, 70 tons of miscellaneous baggage, 553 first-class and 1,034 second-class passengers transported, not including workmen and employees.

El Guante, of Guayaquil, states that after a long period of inactivity the TOQUILLA STRAW HAT is in great demand, and the market of Jipijapa, the center of the industry, is very busy. It is reported that the headquarters of their manufacture is becoming known in Europe, where the hats have heretofore been inappropriately called "Panama hats," and "Jipis," an abbreviation of "Jipijapa," is now being used to distinguish them.

HAITI.

According to press information extensive work will be undertaken by the Government in the PLAIN OF CUL-DE-SAC with a view to irrigating this vast territory, where large crops of sugar cane and other tropical products could be raised.

HONDURAS.

The Honduran engineer Señor Rubén Bermúdez has obtained a concession from the federal government by which he may establish a FLOUR MILL, with a daily capacity of not less than 25 barrels of flour of 200 pounds each, in any part of the departments of Cortés, Santa Bárbara, or Copán. He may import all the wheat necessary to keep the mill in operation and distribute seed among the agriculturists of the section, according to the terms of his contract, in return for which privileges he will encourage the development of the industry in the departments mentioned, furnishing the amount of wheat seed the mayors of various municipalities estimate is needed

free of cost to the farmers for the first two years the concession is in force.

A prospector from the United States who has made several exploring trips through Honduras informs the press that rich PETROLEUM DEPOSITS exist in the departments of Mosquitua, Olancho, and Santa Bárbara, which might be profitably exploited.

MEXICO.

Press reports state that the RAILWAY between the city of Durango and the port of Mazatlán will be completed by the end of the year, as construction has already progressed beyond the city of Llano Grande and is being pushed rapidly. The line will undoubtedly be a prominent factor in the development of commerce, mining, and agriculture in the country, not only because of the wealthy character of the region it traverses but more especially because it will connect the interior directly with the port.

The fact that by the middle of May of this year six companies had been formed to exploit the OIL WELLS of the central plateau in the State of Durango proves that there is oil in the interior as well as on the coasts of the American Continent. The latest concessions applied for are for sections on the El Faro ranch in the district of Mapimí, Durango.

The CORN PRODUCTION of 1918 totaled 1,128,570,535 kilograms, according to reports made by the governors and chambers of commerce of the various States to the department of agriculture.

In 1918 the TOTAL PRODUCTION OF COTTON amounted to 79,293 tons, of which 20,603 were raised in Lower California, 35,101 in the State of Coahuila, 12,566 in Tepic, 8,250 in Durango, 410 in Jalisco, 912 in Oaxaca, 618 in Sinaloa, 605 in Sonora, and 588 in Veracruz.

The RADIO TELEGRAPHIC STATION of the port of Tampico was officially opened the middle of May. The transmitters operate for a distance of 500 miles during the day and 2,000 miles at night.

According to statistics published by the secretaryship of industry and commerce relative to the drilling of OIL WELLS throughout the Republic, 56 wells were drilled in the last two months of 1918.

The Mexican press announces that the secretaryship of agriculture will foster the establishment of AGRICULTURAL COLONIES in various parts of the Republic by encouraging the small landholder, having appointed several commissions of engineers to survey certain tracts of lands to be used for the purpose after concessions previously granted have been annulled.

With the purpose of encouraging INDUSTRY, the Government of the State of Coahuila has exempted all factories and industrial plants which may be organized within its jurisdiction from all taxes and assessments.

A corporation has been organized in the city of Los Angeles, Calif., composed of Mexican and American capitalists, for the exploitation of the Cerro del Mercado IRON MINES in the State of Durango.

A PAPER FACTORY which will utilize the bark and leaves of the banana so extensively grown in the southern and southeastern States of the Republic has been established in Mexico. The fruit of the trees will be used for the manufacture of banana flour.

The Mexican press announces that experiments with an AUTOMATIC TRAIN SIGNAL have proved very satisfactory. The invention, which was made by a Mexican mechanician, consists of a manometer signal which may be used with the air-brake system employed on locomotives, and which acts in response to pressure released by a movable bar along the track near the places where the dispatcher may need to stop a train or diminish its speed. The device is so arranged that even in case the engineer is not at his post or has failed to comply with his orders, the train is automatically stopped before reaching the point of danger.

According to a recent presidential decree a new COMMERCIAL AGENCY will soon be established in the city of Chicago, pleasing results having been obtained by such agencies already in operation in St. Louis, San Francisco, New York, New Orleans, and Barcelona.

On May 6, 1919, the first AUTOMOBILE STAGE ROUTE in the Republic was opened between Huichapán and Tocoautla, in the State of Hidalgo, a distance of 25 kilometers. The line will accommodate both passengers and freight.

NICARAGUA.

According to official data the number of TOBACCO PLANTS under cultivation in the Republic of Nicaragua at the present time is 9,061,706.

Under a contract made by the department of fomento with Pedro José Cerna the Government of Nicaragua grants to Senor Cerna a 30-year concession in which to fish for TORTOISE SHEELS, CORAL, AND MOTHER-OF-PEARL on the Pacific coast of Nicaragua and the islands adjacent thereto, with the condition that the concessionaire agrees to establish in the country within the next five years one or more factories in which to prepare these products for the market.

Under date of March 4 last Congress enacted a law providing for the ADJUDICATION OF LANDS to the inhabitants of the Mesquite Reserve.

Cristobal Najera has obtained from the National Government exclusive permission to manufacture SAFETY MATCHES and sweet chewing gum, the latter to be placed on the market under the name of "Chiclets." The concession specifies that said articles are to be made exclusively from raw materials produced in the country.

An executive decree of March 26 last prescribes that the requests referred to in article 1 of the decree of January 1, 1918, concerning the CUTTING OF TIMBER shall only be made before the minister of fomento (promotion), and that pending investigations before the subdelegations of the treasury should be sent to the same department to be concluded there.

The Executive power has been authorized by Congress to sell at public auction the RAILWAY MATERIAL belonging to the State at various places on the Atlantic coast of the Republic.

PANAMA.

A member of the legislative council of New Zealand has requested the board of trade in Colon to furnish data concerning the possible COMMERCIAL INTERCHANGE of Panama with that country. New Zealand can export to Panama frozen mutton, butter, cheese, and apples.

PARAGUAY.

With the purpose of maintaining cordial commercial and scientific relations between the members of the pharmaceutical guild and foreign scientific institutions which may in any way stimulate the commercial and professional development of pharmacy in the country, the National Pharmaceutical Association of Asunción has voted to open a PERMANENT EXPOSITION OF PHARMACEUTICAL PRODUCTS on May 12, 1919, to include biological, chemical, and industrial products; surgical supplies; modern physical, chemical, and pharmaceutical laboratory appliances, and all modern apparatus used in the pharmaceutical and drug professions.

PERU.

The National Government has appropriated the sum necessary for the completion of the HIGHWAY which will connect the provinces of Lima and Chancay with those of Cajamarca, Bolognesi, Dos de Mayo, Huari, and Huamilites.

According to the report of the Peruvian consulate in Portland, Oreg., 11,009,811 feet of OREGON LUMBER, valued at \$279,441, were exported through that port to Peru.

The minister of the treasury has notified the prefects of the departments of Junín and Loreto by telegram that the National Government has ordered the construction of a RAILROAD FROM NINACACA TO THE PACHITEA RIVER, following the natural route along the Ucayali river and providing an easy method of communication with the eastern part of the Republic.

SALVADOR.

A presidential decree of April 14 places DRY CHEESE imported from other Central American countries on the list of products which enter free of duty, thereby modifying the decree of January 14, 1916.

URUGUAY.

The FOREIGN COMMERCE during the month of January of the present year included: imports, statistical valuation, 2,470,440 pesos; real value, 4,444,321 pesos; exports, statistical valuation, 11,090,409 pesos; balance in favor of Uruguay, 6,646,088 pesos. The statistical valuation of the importations of January, 1918, was 3,403,867 pesos and the real value of the exports, 7,162,222.

VENEZUELA.

According to cable advices the negotiations for the establishment of a NEW LINE OF STEAMERS from Chilean and Colombian to Venezuelan ports are rapidly assuming a definite form. The Government of Chile has taken great interest in extending its commercial relations with other South American countries, and to this end proposes to send a special commission to visit the neighboring republics.

A decree of the governor of the State of Bolivar of April 4 last provides for the construction of a WAGON ROAD from Ciudad Bolivar to connect with the highway which runs to Paragua.



ARGENTINA.

The DIVIDENDS of the Anglo-Argentine Co. continue to increase at each dividend period. The Southern Railway Co. and the Western Railway Co. have just paid a monthly dividend of 1 per cent, and the Anglo-South American Bank has declared a dividend of 6 shillings per share for the six months ended December 31, 1918. The branch of the Yokohama Specie Bank (Ltd.) in Buenos Aires has been notified by the main office in Yokohama that for the six months ended December 1, 1918, the bank has declared a dividend of 12 per cent.

In the May number of the BULLETIN the erroneous statement was made that the National City Bank of New York had opened a branch in Cordoba, Argentina. It is in Rosario that the branch has been established.

BOLIVIA.

On March 19 the President signed a law concerning the COLLECTION OF INTERNAL REVENUE, providing that all revenue of that character, as well as the ordinary taxes enumerated in the law,

shall be collected by the staff of the internal revenue and liquor bureau, in conformity with the instructions issued by the general directorate.

The net receipts of the **BOLIVIAN NATIONAL BANK** of La Paz amounted to 1,558,295 bolivianos (boliviano = \$0.4389 U. S. gold) in the second half of 1918.

A presidential decree of March 10, 1919, authorizes the Bolivian National Bank to import through the national customhouse of the north the following denominations of **BILLS** to replace those which, now worn out, are to be burned according to legal procedure: One million 1-boliviano bills; one hundred thousand 10-boliviano bills; fifty thousand 20-boliviano bills; and thirty thousand 50-boliviano bills.

BRAZIL.

The **SPANISH BANK** of the River Plate with headquarters in Buenos Aires has decided to maintain permanently the branch which it opened some time ago in Rio de Janeiro. This bank has a large capital and numerous branches and correspondents in the Republics in the vicinity of the River Plate.

Decree No. 13407, of January 13 last, permits private persons and companies which have in their establishments manufactured cloth or raw material—that is to say, Brazilian cotton or wool—to negotiate guaranteed **COMMERCIAL LOANS** with the Bank of Brazil. According to the decree referred to, the loans to cloth factories are subject to the following conditions: Term not to exceed six months, subject to an extension for an equal period, when the debtor pays 40 per cent of his debt; rate of interest, 6 per cent per annum, payable in advance. The goods given as security may remain in the possession of the borrower, but they must be insured. Loans will be made up to 50 per cent of the value of the merchandise, which, in special instances, may be increased to 70 per cent if the term fixed does not exceed three months. For the enforcement of this decree the President will issue a credit up to the sum of 50,000 contos.

COLOMBIA.

In the city of Cali a syndicate has been formed for the purpose of founding a **BANK** with a mortgage loan section, to be capitalized at \$600,000 gold.

The mint of Medellín coined 1,495,710 pesos gold in libras (libra = \$4.86 U. S.) and half libras during the first three months of the present year. During 1918 the total **COINAGE** of the mint was 2,143,812 pesos gold.

The governor of the department of Cundinamarca has been authorized by the departmental assembly to contract a **LOAN** of \$5,000,000 gold for the extension of the La Sabana Railroad and

the construction of electric trolleys in the department. According to press reports the Northeast Railway Co. has obtained a LOAN of \$6,000,000 gold in the United States to be used in the construction of the railroad projected.

In the years 1915 to 1918, inclusive, the National Government paid \$2,049,557 gold for INTEREST ON THE FOREIGN DEBT.

The governor of the department of Caldas has negotiated a LOAN of \$500,000 gold with the banks of Manizales for the completion of the Caldas Railway.

In the middle of April a BRANCH OF THE AMERICAN MERCANTILE BANK was opened in Manizales, capital of the department of Caldas.

With the purpose of covering the amount of the present deficit in the treasury of the Republic a LOAN of \$4,000,000 gold has been launched, to which the creditors of the Government who wish to exchange their notes for those of the public debt will be subscribers. The new issue will consist of treasury notes payable to the bearer, of 1, 2, 5, 10, 25, and 50 peso denominations, which will be received at par in any payment made into the national treasury, and for their amortization there will be set aside the product of stamp issues and documentary papers. The Government will grant 2 per cent annual interest to the bearer, payable monthly when due.

On March 29, 1919, the contract for the exploitation of the OCEAN SALT DEPOSITS on the Atlantic coast, owned by the Government, was awarded at public bidding to Sres. Cortissoz, Correa & Co., of Barranquilla, in accordance with the proceedings authorized by law 63 of 1917. According to the terms of the contract the contractors guarantee to the Government a minimum annual receipt from the product of the mines of \$400,000 gold, advancing the sums necessary for the exploitation of the mines. They also advance a special loan of \$230,000 gold at 10 per cent annual interest in sight drafts against London institutions, and fix the price per bag of salt weighing 62½ kilograms.

The President has issued a decree postponing the delivery of the 500,000 pesos authorized by law 58 of 1918 to be expended on the highway from Cúcuta to Magdalena until further notice of the National Government. The sums set aside for other PUBLIC WORKS are divided in the following manner: For the completion of the Sarare road, 100,000 pesos; for the southern highway in Nariño, 50,000 pesos; for the sanitation of Puerto Colombia, 25,000 pesos; for repairs on the Barranquilla customhouse, 100,000 pesos; for the Tolima Railway, 100,000 pesos; for initiating construction work of workmen's houses, 100,000 pesos; aid to the public works in the department of the Cauca, 40,000 pesos; for the aqueduct of the port of Buenaventura, 25,000 pesos; for an agricultural exposition in

commemoration of the centenary of the battle of Boyacá, 15,000 pesos; for construction on the Puerto Wilches Railway, 120,000 pesos; for the Pizarra highway in Boyacá, 30,000 pesos; for canal works in Bogotá, 100,000 pesos; for the Avenue San Pedro Alejandrino and other public works of the department of the Magdalena, 100,000 pesos; for the Puerto Colombia aqueduct, 237,000 pesos; for the Puerto Colombia hotel, 63,000 pesos; for the Cartagena-Barranquilla highway, 200,000 pesos; for reparations to the La Popa Castle in Cartagena, 20,000 pesos; for the purchase of rails for the Puerto Wilches Railway, 80,000 pesos; and for the Honda highway, between the Upper and Lower Magdalenas, 30,000 pesos. The total sum to be expended is therefore 1,535,000 pesos gold.

COSTA RICA.

In the President's Message it was announced that the CUSTOM-HOUSE RECEIPTS IN THE YEAR 1918 totaled 1,165,937 colones (colón=\$0.465 U. S. gold), or 47 per cent less than in 1917, distributed as follows: Through the customhouse of San José, 437,001 colones; Limón, 323,889; Puntarenas, 348,993; and Sixaola, 56,055. In 1917, 2,637,617 colones were received, or 1,471,679 more than in 1918.

The receipts of the PACIFIC RAILWAY in 1918 were \$94,072 colones, and the cost of exploitation 700,808 colones, leaving net receipts of 193,264 colones in favor of the Government treasury, as against 76,869 colones of the preceding year.

CUBA.

By order of the board of directors in London, adopted May 16 last, a 2 per cent dividend of the UNITED RAILWAYS OF CUBA has been declared out of the profits of the fiscal year ending June 30, 1919.

Under a law of May 6 last an appropriation of \$100,000 was made with which to begin the construction of a CART ROAD from Nuevitas to Camagüey, via the town of Minas.

On May 4, 1919, the building erected by the SPANISH BANK OF THE ISLAND OF CUBA for its branch office in Union de Reyes was opened for business.

ECUADOR.

The press of Guayaquil announces that a commission of English bankers is expected in the port city. The commission is to make a contract with the National Government for a LOAN OF 100,000,000 SUCRES (sucre=\$0.4867 U. S. gold) to be used in the amortization of all bonds of the Guayaquil-Quito Railway, in the payment of the respective coupons, and in the payment of the internal debt,

the remainder to be applied to the railroad lines under construction in the Republic at present.

On December 31, 1918, there were 27,248,980 sucres IN CIRCULATION in the country, in the following denominations: Gold, 5,381,288 sucres; silver, 3,244,475; and bills, 18,623,217 sucres. Of the latter, 8,211,000 sucres were issued by the Bank of Ecuador, 7,105,551 by the Agricultural Bank, 3,062,279 by the Bank of Pichincha, 518,140 by the Bank of Azuay, a total of 18,896,970; but of this amount 273,753 remained in the coffers of the banks, leaving in circulation the amount stated.

The rate of exchange on DRAFTS OF THE UNITED STATES AND PANAMA, which was fixed by the President at 205 per 100, has been modified by the Government to 215 per 100.

GUATEMALA.

El Guatemalteco announces that as a result of the payment of the annual interest on the foreign debt before it fell due, the GUATEMALAN BONDS rose 6 points on the London Exchange in less than two months, being quoted higher than those of other countries which carry higher interest.

In order to obtain funds for the reconstruction of the central post office and national telegraph and telephone building in Guatemala city, the President issued a decree April 12 of this year, establishing a RECONSTRUCTION TAX of two "reconstruction stamps," 12½ and 25 centavos in denomination. The former is to be attached to every letter and package, whether registered or not, sent through the postal offices of the Republic, for either local service or otherwise, while the 25-centavo stamp is to be attached to all telegraphic or cable messages sent through the Government offices, in addition to the regular rates of telegraphic transmission. The stamps will be sold in a bank to be designated by the Secretary of the Treasury.

On April 22 the legislative assembly passed the law which provides that every bank in the country will set aside the sum of 10,000,000 pesos of a new issue of notes, representing national currency, for a fund to be called the AGRICULTURAL AND FINANCING LOAN FUND, the fund to be reserved exclusively to lend money at interest to the agriculturalists of the country and to persons who were injured by the recent earthquakes, for the purpose of reconstruction, after compliance with the customary formalities. Interest on the fund will be collected at 4 per cent annually, and the loans will be for periods of not less than two years.

MEXICO.

The NATIONAL EXPENDITURES for public administration in the first four months of the present year totaled 30,514,840 pesos, distributed as follows: Legislation, 1,187,425 pesos; executive ad-

ministration, 336,190; judiciary, 221,059; ministry of state, 474,135; foreign relations, 257,897; treasury, 5,212,096; war, 7,458,269; agriculture, 529,513; communications, 1,454,713; industry, 396,676; university department, 391,480; comptrolling department, 441,523; department of sanitation, 223,572; national attorneys' fees, 62,966; supplies, 527,214; and military supplies (quartermasters' department), 11,340,109 pesos.

According to the Claims and Indemnities Commission, which has been in operation for about one year, 9,342 CLAIMS had been presented before the beginning of May of the present year, of which 1,278 are still under consideration, 5,745 have been adjudged, 1,380 approved, and 939 settled. The total amount of claims presented up to the present is 43,375,856 pesos, the majority having been presented by Mexican citizens.

By a presidential decree of May 13, 1919, a previous law creating a SPECIAL TAX ON ALL CLASSES OF ADVERTISEMENTS, was annulled, so that newspaper announcements, theater and commercial signs, etc., are now freed from the tax.

NICARAGUA.

The period for the COLLECTION OF CLAIMS allowed by the Commission of Public Credit of the Republic has been extended, under a law of January 20 last, until June 30, 1919.

The amount of the NATIONAL REVENUES in March, 1919, aggregated 114,520 cordobas.

Under a decree of March 3 last congress enacted a law prescribing that the FISCAL YEAR be from July 1 to June 30, inclusive, and authorizes the President to make the necessary arrangements with Brown Bros. & Co., J. & W. Seligman & Co., the Corporation of Foreign Bondholders, and the National Bank of Nicaragua for the purpose of making the following changes in the financial plan: (a) That a copy of the budget be delivered to the National Bank of Nicaragua on or before June 1 of each year, and (b) that the surplus be determined once only, by reason of this change, within a month from June 30 of the present year, and, in future, within a month from the close of each fiscal year. Said decree also provides that the expense budget of January 2, 1919, shall continue in force until December 31 of the present year.

PANAMA.

A law of December 30, 1918, authorizes the Executive to secure by appointment or contract a FISCAL AGENT, either national or foreign, to which end he will solicit the good offices of the Government of the United States. The agent referred to will submit a detailed

report on the financial conditions of the Republic, together with a statement of the internal and foreign debt, and the present revenues of the country and their sources. It will be the duty of the agent to cooperate in preparing the budget and the fiscal laws, to inspect the accounting system which obtains in the Republic, see that the laws concerning same are complied with, and to aid in the settlement of accounts and claims having their origin in the different offices of the Government.

PARAGUAY.

Following is a statement of the RECEIPTS AND EXPENDITURES OF THE MUNICIPALITY OF ASUNCION for the year 1918: Receipts, 5,950,326 pesos; expenditures, 6,314,138 pesos, leaving a deficit of 373,812, caused largely by the aid the municipality extended to indigents during the epidemic of influenza.

In 1918 the POSTAL AND TELEGRAPH RECEIPTS showed an increase of 203,000 pesos over those of the previous year.

The budget passed for the period between October 1, 1917, and June 30, 1918, and which remained in force until December 31, 1918, anticipated an annual deficit of 5,000,000 pesos paper and 100,000 gold, approximately, but according to the report of the general treasury there was a SURPLUS of 4,703,634 pesos paper during the 15 months.

The NATIONAL RECEIPTS for the fiscal period from October 1, 1917, to December 31, 1918, totaled 1,182,424 pesos gold and 64,398,185 pesos paper, of which 914,975 gold and 36,524,151 paper, or more than half, were received through the customhouses.

The INTERNAL DEBT of the nation amounted to 2,044,783 pesos gold and 33,133,445 paper on December 31, 1918.

On December 31, 1918, the EXTERNAL DEBT of the Republic totaled 5,612,701 pesos gold, distributed as follows: (a) London loan 1871-72, 3,454,212 pesos gold; (b) Argentine National Bank Loan, 68,227; (c) loan, law of November 27, 1912, 2,090,261 pesos gold. During 1918 the sum of 272,282 pesos gold amortization fund was paid.

According to the latest presidential message the OFFICE OF EXCHANGE has a capital of 1,394,356 pesos gold and 1,017,211 pesos paper.

The loans granted by the AGRICULTURAL BANK of Asuncion in 1918 for agricultural projects and allied industries totaled 2,475,903 pesos paper and 1,245 pesos gold; amortization paid in the year, 4,485,034 pesos paper and 1,245 pesos gold; and interest received, 1,122,397 pesos paper. The bank has a capital of 24,590,097 pesos paper, which is utilized in the development of agriculture in the country.

PERU.

On April 1, 1919, a SAVINGS DEPARTMENT was established in the Lima branch of the Bank of Peru and London, in which deposits may be made from 1 sol upward, at 5 per cent annual interest.

By law No. 3083 of 1918 concerning the DELIVERY OF GOLD TO THE SUPERVISORY BOARD, the national congress provides that the order stated in article 2 of law No. 2776, to deliver all available gold, shall be extended to apply to all banks, whether specified by the law or not, referring not only to the gold on hand, but also to all that which may enter the country while law No. 2776 is in force. The surrender of the gold is independent of its issuance and the supervisory board will give checks in payment for it. The new law amplifies the authority granted to the President in article 14 of law No. 2776 to enter into agreements with the United States Government whereby interest-bearing notes or bonds of the Treasury of the United States may be deposited in the Federal Reserve Bank, in case the United States Government contracts to return the deposits at par in gold when the prohibition on gold exportation has been removed. It further provides that the Peruvian Government may not purchase such bonds without the previous signing of a convention containing these stipulations. The delivery of silver money through banks is also regulated, and the amount of gold coin that may be carried out of the country by an individual is limited to 10 pounds (Peruvian pounds = \$4.8665 United States gold).

The municipal council of Lima has voted the creation of NEW EXCISE TAXES and the increase of certain of the former rate.

URUGUAY.

The FIRST AMERICAN CONGRESS OF ECONOMIC AND COMMERCIAL EXPANSION held its sessions in Montevideo January 28 to February 8, 1919, as previously announced. Official representatives from the following countries were in attendance: Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, El Salvador, Guatemala, Mexico, Paraguay, Peru, Uruguay, and Venezuela. A partial realization of the important work accomplished in the 10 regular sessions of the congress may be obtained from the following summary of the resolutions passed:

ECONOMIC-COMMERCIAL EXPANSION.—1. To make known to American governments and companies the desire of the congress that steamship lines be established between the Americas. 2. To encourage the consumption of American products in the two continents. 3. To recommend the taking of a general and industrial census in all the countries of America in 1920 and every tenth year thereafter. 4. To advise the allowance of a preference to domestic

capitalists in railway concessions, reserving rights of intervention and rate revision. 5. To devote especial attention to the construction and repair of highways. 6. To encourage the holding of an international American technical conference with the purpose of establishing uniform methods of classifying merchandise. 7. To request the Pan American Union at Washington to reprint the commercial nomenclature with the revisions introduced in customs tariffs up to the present time. 8. To advise that parcel post charges be fixed and collected at the time of forwarding; that declarations as to contents made at foreign post offices be considered a bill of lading, every party using the system to present a written declaration in the form and under the conditions stipulated by the respective authorities of the various countries. 9. To recommend the consideration of international tariffs to the governments represented at the congress, with a view to making systems uniform and facilitating the exchange of American products. 10. To encourage the protection of international means of communication and thus contribute to the economic development of the American nations. 11. To recommend that American governments periodically appoint specialists to study natural resources and the most satisfactory method for their development. 12. To encourage the conservation of natural forests by every possible means and to plant artificial ones, regulating their exploitation for industrial purposes. 13. To encourage the establishment of colleges or departments of economic expansion in the colleges of economic sciences, schools, and other institutions of economic and commercial branches, that the study and practical solution of economic problems may be intensified in the effort to cement Pan American commercial friendship. 14. The comparison of the work of institutes and departments of economic expansion, so that problems studied in different countries may be compared and corrected. 15. To advise the creation of ministries of commerce and industry, stock raising, and agriculture in the countries of the continent which have not yet such departments. 16. To express the unanimous recommendation of the congress that the transcontinental railroads under construction be finished immediately. 17. To recommend to the American governments the importance of the revision of their laws and treaties concerning coastwise trade as a means of stimulating economic and commercial exchange in the continents. 18. To encourage the creation and development of industrial fishery schools and derivative industries for social and economic purposes. 19. To recommend the study of commercial treaties in force among the American nations. 20. To ask the Governments of American countries to submit to the second congress, to be held in Rio de Janeiro, their most perplexing problems in transportation, tariffs, and customs duties applicable to their principal exports. 21. To distribute propaganda material among public schools of the continents. 22. To

encourage the establishment of permanent international museums of natural history connected with the business colleges of the various countries. 23. To encourage the holding of periodical expositions and fairs in which natural products as well as manufactures shall be displayed.

FOREIGN RELATIONS.—24. To recommend as necessary the establishment of uniform standards to regulate contracts on international consignments of merchandise, inviting the Pan American High Commission to inaugurate the movement. 25. To advise the American governments to adopt measures for the regulation of expositions, as authorized by the diplomatic convention signed in Berlin in October, 1912. 26. To recommend the creation of permanent exposition commissions presided over by the proper minister. 27. To recommend the following: (*a*) To require only the customhouse manifest and invoice as consular documents; (*b*) to adopt as models the manifests and formula of invoices approved by the Fourth International Congress of American States of Buenos Aires and by the Pan American High Commission; (*c*) to abolish consular viséing of the bill of lading and certificate of origin; (*d*) to require only four copies of the consular invoice, allowing the shipper to procure others by means of a minimum number of every copy; (*e*) to make the specification of weights and measures according to the metrical decimal system; (*f*) to make out the consular invoice in both the language of the country of origin and that of destination; (*g*) to limit the consular fees to the cost of services rendered in so far as possible; (*h*) to establish in the collection of fees for legalizing consular invoices the proportion of the value of the merchandise referred to in the document. 28. To recommend that consular officials be invested with all authority practicable. 29. To advise that the title of consul be applied only to those officers in office—not to consuls elect or honorary. 30. To recommend that graduates of official institutions of commercial instruction be given the preference in appointments to consulates as commercial attachés and trade advisers. 31. To recommend that consuls be required to make trips to the countries they represent at specified intervals, to keep in touch with the progress being made by their countries. 32. Resolved, (*a*) that the principle of arbitration be approved and adopted in solving questions which may arise between merchants whose countries are members of the Pan American Union when contracts are of an international character; (*b*) that the convention concerning international commercial arbitration agreed upon by the chambers of commerce of Buenos Aires and Montevideo and the chamber of commerce of the United States of North America be adopted; (*c*) to recommend laws requiring that commercial differences of an international character be settled by arbitration, the arbitral tribunal to act in the country in which

the contract in question is to be carried out or where the goods which occasioned the controversy are held.

CREDITS.—33. To suggest that all time sales be accompanied by bills of exchange, or such other paper or document payable to order as is in use in the countries involved. 34. To recommend that national banks discontinue the system of direct credit, adopting banking rediscount as a means of limiting and regulating credits. 35. That private and direct communication be established among American banking institutions to facilitate exchange of commercial information. 36. The congress completely indorses the efforts of Counsellor Octavio Morató concerning legislation on checks, recommending (a) that the resolutions offered by the Conference of The Hague of 1912 be adopted concerning laws governing checks, but only in so far as is strictly related to the nature of the negotiable paper to be issued against a bank and paid by it, within every country; (b) that regulations be made in response to problems presented by the conference in regard to national laws or to be resolved by contracting States; (c) that a sight draft on a bank drawn in foreign countries be considered, according to uniform laws, a check, and treated as such as to its circulation, negotiability, etc., the laws now in force concerning the responsibility of the persons drawing the money to remain in force; (d) that, since a sight draft drawn by a bank or on a bank represents a medium of payment and exchange of money at a distance rather than an instrument of credit, the stamp tax on them shall be levied with reference to the tax required by a check. 37. It was voted to recommend that the American States incorporate in legislation the curtailing of the circulation of checks within their national frontiers, allowing international circulation of bills of exchange. 38. It was recommended that the proposal of the International high Commission of Buenos Aires concerning uniform legislation be accepted in regard to bills of exchange, with the exceptions inserted by the Uruguayan delegation, as approved by the conference. 39. It was recommended that the International High Financial Commission, and through it the national commissions of the various Republics, consider the treatise of Prof. Lorenzen on bills of exchange (*Lex locis contractus*).

INTERCONTINENTAL POLITICAL ECONOMY.—40. The creation of an international American bureau of labor in Montevideo was recommended. 41. The teaching of various methods of cooperation, such as certain members on programs and the organization of bureaus of information in the commercial high schools of America, was recommended. 42. To recommend to the governments represented at the conference the lowering or removal of taxes levied upon cooperative societies. 43. To recommend to national banks the reduction of interest charged cooperative societies. 44. To recommend to the

permanent commission the study of intercontinental works on political economy. 45. To request the American Governments to study the industries of every country, their productive capacity, the quality of their products, the matter of credits, etc. 46. To leave to the next congress the study of the measures which the American nations should undertake in order to arrive at the most effective means for the economic and social progress of their peoples. 47. To recommend to the permanent commission and proper delegates the means for attaining American economic and commercial expansion. 48. To advise the removal of customhouse duties on fish, vegetables, and raw fruit shipped for consumption.

COMMERCIAL INSTRUCTION.—49. To declare necessary the incorporation of courses in American comparative economy and customhouse legislation—the latter to be a part of consular preparatory courses—recommending the publication of the economic-financial history of their respective countries and make same available, to the present seminaries of economic investigations or to commercial high schools. 50. To encourage the exchange of professors and students among higher institutions of commercial instruction. 51. To recommend the signing of international agreements in favor of reciprocal recognition of the titles or degrees conferred by commercial colleges, for the granting of scholarships and for the exchange of professors. 52. To delegate the permanent commission created by the conference to compile the legislation of the American States with reference to commercial instruction, which will be advised by a commission of professors and technical experts, with a view to proposing plans and programs of instruction in accord with the following proposition: Commercial instruction, which presupposes previous primary training, is divided into three groups—(a) elementary instruction, dependent or independent; (b) secondary instruction; (c) higher instruction. These three groups will include (a) the formation of commercial aids, etc.; (b) preparation for a broad commercial career; (c) furnish economic, financial, and commercial data and prepare for administrative and industrial duties, insurance, and consular actuaries, etc. 53. To emphasize the importance of establishing cultural studies of two grades—one limited to the first and second class of commercial studies, and the other applicable to the third group. 54. To leave the consideration of women's instruction, as presented by the National Commercial Institute of Lapaz, Bolivia, to the permanent commission. 55. To recommend that the study of commercial geography be separated from that of economy in higher institutions of commercial instruction, where such steps have not already been taken, and that the study of commercial geography be begun in primary schools; to recommend the organization of periodical assemblies for preparing commercial and economic geographical text-

books for every country, the prize works to be exchanged. 56. To recommend the creation of bureaus of bibliography and information, independent of or in connection with seminaries or institutions of investigation existent or to be founded in America, with the widest exchange of economic, financial, and commercial data. 57. To recommend the legal recognition of professions in which diplomas are granted by institutes of higher commercial instruction, in commercial, civil, and administrative branches. 58. To authorize the term *mercología* to replace *mercilogía*, the branch the object of which is to give a scientific basis to commercial studies. 59. To recommend the intimate connection between *mercología* and the study of economics, customhouse legislation, commercial geography, etc. 60. To recommend that the appointment of customhouse inspectors be given to graduates of schools of higher commercial instruction, in view of the technical and financial duties involved. 61. The bestowal of a prize to be known as the "Pablo Fontaina Commercial Branches Prize" to pupils of higher commercial schools is recommended.

CONSULAR COURSES.—62. To recommend that candidates for the diplomatic career be graduates of official institutions of higher commercial instruction, or selected by competitive contest. 63. That in case contests are not required as a basis of determining the successful candidates, those who present such diplomas be given preference. 64. To recommend the creation of offices of commercial attachés in the legations, with franking and other privileges enjoyed by diplomatic officials.

LIFE INSURANCE AND ANNUITIES.—65. To recommend to the Governments, and through them to institutions or American statistical offices, the organization of a systematic method of annual demographic reports of the general trend of population in order to be able to initiate the preparation of tables of vital statistics within a short time, headquarters of the international office of demographic statistics to be in every capital of the various American Republics. 66. The creation of an international office of demographic statistics with headquarters at Santiago de Chile.

SCHOOLS OF COMMERCE AND SPECIAL COURSES.—67. To establish general welfare courses in preparatory schools and hold lectures on commercial ethics in institutes or higher schools of commerce, which will be presided over by competent professors.

SPECIAL COMMISSIONS.—68. To create a permanent international commission with headquarters at Montevideo, and a delegation in every American country, to recommend the holding of subsequent conferences and the publication of the proceedings of same. 69. To appoint a commission whose duties are prescribed in the law of July 5, 1918, as follows: (a) To communicate the motions carried to the minister of public instruction, and (b) to publish the report of the congress.

VENEZUELA.

In 1918 the RECEIPTS FROM RAILWAY LINES extending into the interior of Venezuela from the shores of Lake Maracaibo were (in bolívares) as follows: Táchira Railway, 1,242,735; La Ceiba Railway, 980,826; and the Santa Bárbara Railway, 266,789. (Bolívar = \$0.193.)



INTERNATIONAL TREATIES

CHILE.

On March 28 last an ad referendum treaty between Chile and Great Britain for the establishment of a PEACE COMMISSION, charged with solving such disputes as may arise between the two countries which can not be settled diplomatically, was signed in Santiago. The contracting parties agree that all disputes, regardless of their nature, which may arise between them, after direct diplomatic negotiations for their solution have been exhausted, except those whose settlement has been obtained through existing agreements between the two countries, shall be submitted for investigation and report to an international permanent commission, it being agreed, furthermore, not to declare war or begin hostilities during the said investigation and before the respective report has been made. The commission is to be composed of five members, which shall be appointed as follows: Each Government shall choose one member in its own country and another member from a third country, the fifth member to be selected by the mutual agreement of both governments, it being understood that he shall not be a citizen of either of the two countries in interest. The commission shall be appointed within six months after the ratification of the treaty. Should any question arise which can not be solved by direct negotiations, it must be submitted immediately to the commission which may spontaneously and by unanimous consent offer its services for such negotiation. In case the Government of Great Britain believes that the interests affected by the controversy which is to be considered are not properly those of the United Kingdom, but of the Dominion of Canada, the Australian Union, the Dominion of New Zealand, the South African Union, and Newfoundland, said Government may substitute in place of its member another person selected from a list furnished by each of the self-governing dominions. The report of

the commission shall be issued within one year from the date of the commencement of the investigation unless this term is shortened or extended. The parties reserve the right to act independently with reference to the subject of the controversy after the report has been submitted. The treaty is to remain in force five years, and, in addition, for 12 months after its denouncement.

VENEZUELA.

Under date of September 9, 1918, through a communication of its minister in Caracas, the Government of France advised the Government of Venezuela of its intention to terminate the CONVENTION OF COMMERCE AND NAVIGATION of February 9, 1902. The convention will, therefore, expire on September 10, 1919, provided no extension is effected in the meantime.



LEGISLATION

ARGENTINA.

Owing to the fact that representatives from some countries have stated that they are not so organized as to permit them to issue the IMMIGRANTS' CERTIFICATES referred to in decrees of April 26 and October 3, 1916, concerning proofs of good conduct and the industrious habits of persons who emigrate to Argentina, the department of agriculture, under date of March 31 last, decided that the judicial certificates required in accordance with the decree of April 26 may be substituted by other documents issued by the proper authorities showing the identity, good conduct, and industrial aptitude of the immigrant. Until new rules and regulations are issued, the proper Argentine officials will deny entrance to immigrants comprised in the prohibitions of laws 817, 7029, and 9143, bearing in mind the provisions of article 1 of the decree of April 26, 1916. On legalizing the documents of proof of the identity of the immigrants, Argentine consuls shall require the documents referred to in article 1 of said decree, and in addition a signed and sealed photograph of the party in interest.

The secretary of agriculture issued, under date of April 2 last, rules and regulations governing the duties of the INSPECTOR OF MEATS and products intended for export or for consumption within zones under national jurisdiction. These rules and regulations cover the different cases that may arise. The general stock bureau is charged with their compliance and enforcement.

CHILE.

Under law 3379 of May 10, 1918, a RETIREMENT STATE RAILWAY SAVINGS ASSOCIATION was founded and commenced operations on July 1 last. The object of the savings association is to establish a retirement and social fund for railway employees, encourage voluntary and social aid savings and the development of societies which have for their object the improvement of the moral, intellectual, social, and economic conditions of employees and their families. The obligatory members of the association are shop and contract hands, salaried employees who have been in the service one year, and, in general, all employees, workmen, and laborers who, without specifically belonging to the classes mentioned, comply with the rules of the association. The funds of the association consist of 5 per cent of the salaries, wages, and fees of its members. After 5 per cent of the salaries and fees, and one-half mill of the gross receipts from traffic and other sources of the general retirement fund have been accumulated, the retirement board shall determine the percentage of annual profits to be credited to the different individual accounts.

COLOMBIA.

The INCOME TAX LAW, No. 56 of 1918, has been modified by presidential decree of April 11, 1919, to provide that native or naturalized citizens residing in the country or whose legal residence is in the country, and who receive an income, or native or naturalized citizens whose residence is not within the country but who receive an income from goods or capital in Colombia, will pay the following annual tax: (a) 3 per cent on incomes from capital invested; (b) 2 per cent on incomes from personal or real property exploited directly or indirectly by the owners; and (c) 1 per cent on incomes derived from labor or industry of persons alone.

COSTA RICA.

The NEW PENAL CODE fixed by Law No. 15 of November 30, 1918, went into effect on April 11 of the present year. It is a modification of that which had been in force for approximately 40 years.

CUBA.

A law promulgated by the President of the Republic on January 18 last repeals the law of August 3, 1918, establishing OBLIGATORY MILITARY SERVICE, with the exception of articles 40 and 44 of said law. Likewise the rules and regulations issued by the executive relating to the enforcement and execution of the law in question are also repealed. Laws and orders issued prior to the law of obligatory military service remain in force. Amnesty is granted to viola-

tors of the repealed law and to persons convicted of crime and misdemeanors committed for the purpose of evading obligatory military service before December 31, 1918, except crimes against persons, honor, and property that are not punishable under articles 435 and 436 of the Penal Code.

DOMINICAN REPUBLIC.

Executive order No. 278, promulgated on April 4, 1919, treats of the EMIGRATION OF LABORERS, and prescribes that until April 1, 1921, it is prohibited without express authority of the Executive power—(a) For anyone to induce or attempt to induce laborers to leave the country for employment abroad by means of the offer, general or specific, of any material consideration or compensation; and (b) for any vessel to undertake a voyage from the Dominican Republic, the principal object of which is to transport laborers for employment abroad in countries of which such laborers are not citizens or subjects, or in which they have no domicile or residence. Violations of this order are punishable by a fine of not less than \$100 nor more than \$500, or imprisonment for not less than two nor more than six months, or both. The fines in the latter case shall constitute a lien on such vessel and on any property of its owner or agent and the imprisonment shall be imposed on the owner or agent thereof.

On April 7 last the Executive power promulgated order No. 280, creating a DOMINICAN TARIFF COMMISSION, with headquarters in the city of Santo Domingo, composed of a chairman, four members, and a secretary. The commission is authorized and directed to examine and make use of the statistical and other data compiled by the general receiver of Dominican customs relating to imports and exports and the application of the existing tariff thereto. The commission will consult with and invite suggestions from the general receiver of Dominican customs, importers, exporters, and other interested parties, and may, in its discretion, hold special sessions for discussion on debatable points. In order that the business interests affected may have as much time as possible in which to adapt themselves to the revised tariff, the commission is directed to submit its report not later than September 1, 1919, in such form that the new tariff may be published not later than October 1, 1919, to become operative on January 1, 1920. The sum of \$6,000 is made available to defray the expenses of the commission.

HAITI.

On April 23, 1919, the *Moniteur*, the Haitian official gazette, published the rules and regulations concerning the PUBLIC HYGIENE as provided by the law promulgated in February last. By enforcing

these rules in the most rigid manner the public health board look forward to an early improvement of the sanitary conditions of the Republic.

NICARAGUA.

Under a law enacted by congress on February 25 last **CURRENTS AND NATURAL WATERFALLS** capable of producing a greater power than 25 horsepower can not be alienated. The executive power, however, may lease same for a stated consideration for a term not to exceed 35 years, provided the lease is approved by congress.

On February 21 last congress passed a law concerning **AGRICULTURE AND LABORERS** under the terms of which there are established in all of the municipalities of the Republic agricultural judges appointed by the supreme court. These judges will have jurisdiction in minor actions relating to agriculture, rural enterprises, stock, construction works, domestic service, and contracts with artisans.

PANAMA.

On January 27 last a law was enacted concerning the **PRODUCTION AND SALE OF LIQUORS**. Under this law the distillation and refining of alcohol extracted from cane sugar of not less than 35° Cartier is free. Exported alcohols, those intended for scientific purposes, and those of 40 or more degrees Cartier which have been denatured, are free of taxes. Establishments in which liquors are sold by retail must pay in Panama and Colon a monthly license of 150 balboas. In the other capitals of the provinces this license is 50 balboas, and in the capitals of districts 30 balboas.

The **FIREMEN'S INSURANCE LAW** at Panama and Colon was promulgated on January 2 last. Under this law the Executive is authorized to pay the sum of 2,000 balboas to the heirs of any of the active members of the Panama and Colon firemen's organizations who die in the discharge of their duties.

A law of January 7 last amends in part the **FISCAL CODE**. The most important change consists in the inhibition placed on the President of the Republic, members of the cabinet, members of congress, judges of the supreme court, and the attorney general to become sureties in favor of employees charged with the management of the national treasury.

On January 20 last the law concerning concessions for the exploration and exploitation of minerals was promulgated. According to this law the President may make with natural and juridic persons contracts based on the following terms: (a) Exclusive rights for 10 years to explore mines within specified zones; (b) ownership in the mines discovered by the concessionaire, as well as the rights which the

present laws concede to the owners of mines in territories adjacent thereto; (c) exemption for a certain number of years from national and municipal taxes; (d) obligation on the part of the nation to issue and maintain in force sanitary rules in the mining zones, and a police force maintained by the concessionaires; (e) the free use of streams and waterfalls; and (f) the regard by the concessionaire of the best interests of the country.

The amended NATIONAL LOTTERY LAW was promulgated on January 27 last. Under this law the lottery receipts will preferably be given to the St. Thomas Hospital, the insane asylum, and the lazaretto. The sale of foreign lottery tickets is prohibited in the Republic.

On December 26, 1918, the law AMENDING THE CONSTITUTION was published. This law abolishes the death penalty; prescribes that any person may exercise any honest calling or occupation; that the election of President shall be by direct vote; and that, beginning with 1924, elections of deputies shall be held every four years.

PARAGUAY.

In order to standardize the method of collection of CONSULAR FEES the following regulations were adopted by law No. 9486, which went into effect April 15, 1919: (1) The consular officials may not receive customs duties other than the proper documentary stamps which are attached to the bill of lading; and (2) the documents which because of the lack of evaluation are sent without such proper stamps must be marked "A reponer" (To be filled out), and they shall be presented and filled out in the internal-revenue offices, as this formality is necessary for their acceptance in the customhouses.

PERU.

By legislation of December 30, 1918, effective January 9, 1919, article 278, the second half of article 53 and the last clause of article 95 of the PENAL CODE were modified; articles 284, 285, 288, and 289 abrogated; and article 70 of the Penal Judicial Proceedings Code modified.

URUGUAY.

As a safety measure, the President of the Republic on March 27 passed a law concerning the CARRYING OF WEAPONS, in which the arms the use of which is prohibited are enumerated, with the corresponding penalties, the steps necessary to obtain permission to carry arms are set forth, and the conditions under which they may be carried are stated.

On March 26, 1919, the President promulgated a DECREE which provides that high public officials shall not have any private interests

in business matters that are to come before the legislative, judicial, or other governmental departments. The prohibition applies to the President, the ministers, secretaries, subsecretaries, and other officials. Should any such official deem his personal intervention necessary to defend his private rights, a special public authorization will be required.

By a law of April 7 article 333 of the CONSULAR REGULATIONS was modified to read that every owner of merchandise shall be provided with a bill of lading, which may not contain lists of goods belonging to more than one shipper. In case the assignee be a maritime agent, a bank or banking agency, a customhouse clearing officer, commission agent, or other person who does not make a practice of selling goods, the merchandise will be considered to require as many vouchers and bills of lading as there were customhouse transfers involved in its shipment.



PUBLIC INSTRUCTION AND EDUCATION

CHILE.

The EDUCATIONAL DEVELOPMENT OF CHILLAN, capital of the progressive province of Nuble, has been quite noticeable during the last few years. There are now in operation in Chillan four lyceums, one for males and three for females. The lyceum for males and one of the lyceums for females are Government institutions, while two of the lyceums for females are private schools. Particular attention is given to the education of girls, instruction being given in the classics and especially in social science, the courses being patterned after the modern European system. The Government school for girls has more than 300 pupils. Fourteen courses are available, three of which are preparatory. The Pedagogical Institute for Girls, which was founded in 1912, gives great attention to scientific studies, as well as to the moral, social, and artistic instruction necessary to fit its pupils for university courses and for home and social duties. This institution has more than 250 matriculates. The American Lyceum for Girls, founded in 1898, is conducted along the most modern lines, instruction being given in the sciences, the classics, and moral and artistic education. This institution has an able corps of professors and a library containing more than 3,000 volumes. Courses are given in music, painting, and applied and domestic sciences. In 1918 this institution had more than 200 pupils.

Statistics published in April last on the PUBLIC SCHOOLS OF CHILE show that in 1917 there were 3,772 schools in operation in the Republic, 3,014 of which were Government primary schools, 359 private primary schools subventioned, 87 private primary schools not subventioned, 149 secondary and special Government schools, 112 secondary and special private schools subventioned, 32 secondary and special private schools not subventioned, 12 Government high schools, 1 private subventioned high school, and 6 private nonsubventioned high schools. The Government primary schools were attended by 350,836 pupils, the private subventioned schools by 52,174, and the private nonsubventioned schools by 8,581. The teaching force of the Government high and elementary schools numbered 6,739 persons, and the cost of maintenance, including salaries, board, etc., was 16,749,597 pesos (peso, currency, = \$0.19), or an average per school of 5,598 pesos, or 49 pesos per student. The subventions for private primary schools aggregated 568,475 pesos. In 1917 there were 15 normal schools with a corps of 391 teachers in operation in the Republic. The students of the normal schools numbered 1,937, of which 728 were males and 1,209 females. The Government secondary schools were attended by 29,883 pupils, the subventioned secondary schools by 10,923, and the nonsubventioned secondary schools by 6,789. There were in operation 42 lycéums for males and 45 for females, the former having 900 and the latter 739 professors. In the special schools of the Government the matriculation during the year was as follows: Commercial schools, 3,002; agricultural schools, 488; mining school, 177; school of arts and crafts, 440; professional schools for girls, 4,825; institute of physical education and technical school, 317; conservatory of music, 1,196; deaf and dumb school, 87; manual training, 1,428; special army schools, 807; marine school, 875. The Government expended on these schools, 772,331 pesos, plus 331,073 pesos in the form of subventions. The Government schools devoted to higher education had 3,990 pupils, of which 851 were women. The private schools instructed only 721 men. The University of Chile conferred in 1917 the following degrees and titles: Architects, 46; dentists, 186; pharmacists, 236; civil engineers, 207; physicians, 327; State professors, 341; licentiates in medicine, 201; bachelors of law, 1,237; licentiates of law, 899; mathematicians, 662; and bachelors of literature, 4,524; or a total of 9,217 titles and degrees.

COLOMBIA.

Sres. Bernabé Riveros, Marco A. Vidales, and Daniel Uribe have been elected president, vice president, and secretary, respectively of the organizing board of the STUDENT ASSEMBLY to be held in the city of Bogotá, August 7, 1919, in celebration of the centenary of the battle of Boyaca.

Recent rulings of the ministry of agriculture and commerce modify the curriculum of the AGRICULTURAL AND STOCK RAISING SECTION of the Agricultural High School of Bogotá, making the course cover five years.

The University of the Cauca has established a MACHINE SHOP and opened it for operation. The workshop is equipped with all the modern machinery and apparatus necessary for whatever work may be presented to it, and it is expected to give a theoretical and practical education to the sons of workmen who are desirous of learning a trade.

COSTA RICA.

In 1918 fully 300 PRIMARY SCHOOLS, with an enrollment of over 30,000 pupils and a staff of 1,500 teachers, were in operation in the Republic. Approximately one-third of the teachers were engaged in circuit inspections, supervision of institutions, and conducting special classes in the various establishments.

VACATION CLASSES have been organized with the purpose of giving technical training to teachers and giving them an opportunity to exchange methods. It is expected that this system will tend toward the standardization of instruction throughout the country.

CUBA.

A recent Executive decree authorizes the construction of a building for the INSTITUTE OF SECONDARY INSTRUCTION at Santiago de Cuba on lands now occupied by the local sanitary office.

From the bequest of \$600,000 made by Cayetano Inclán for a SCHOOL OF ARTS AND CRAFTS in Habana, \$48,000 has been expended in acquiring a site for the erection of the school building. The new school will be in charge of the Silesian Fathers, an organization perfectly equipped for carrying out the purposes of the bequest.

Under date of April 1 last the President of the Republic issued rules and regulations governing AGRICULTURAL SCHOOLS, the Spanish text of which is published in the Official Gazette of April 28, 1919.

MEXICO.

The Mexican Geological Society has agreed upon the conditions for the establishment of a SCHOOL OF MINING ENGINEERING, founded upon those of Great Britain and the United States, which are the best of their class in the world.

In an assembly of lawyers and men of letters versed in international law, held in Mexico City early in May of this year, the constitution of the MEXICAN ACADEMY OF INTERNATIONAL LAW was adopted. The institution, like analogous bodies in other countries, has as its object the study of all problems of international

character, and particularly those relating to Mexico and the other American nations. There will be three classes of members of the organization—honorary, active, and corresponding.

PARAGUAY.

During the year 1918 PUBLIC SCHOOLS to the number of 1,015 were in operation in the Republic, including rural and graduate schools of the capital, besides 72 private schools, or a total of 1,087, employing 1,607 teachers (463 men and 1,144 women), of whom 140 were employed in private schools.

At the close of the school year of (1918) 60 NORMAL SCHOOL TEACHERS, 15 men and 45 women, were graduated. The registration in the normal schools of the country totals 268, of whom 64 are men and 204 women.

During 1918 a total of 756 students were registered in the SCHOOLS OF SECONDARY INSTRUCTION under the supervision of 54 professors.

The following statistics illustrate the increase in enrollment in UNIVERSITIES in the country during 1918: Registration in the College of Law and Social Sciences, 13 professors and 132 pupils; College of Medical Sciences (first year), 2 professors, 43 students; Law School, 6 professors, 32 students; School of Pharmacy, 7 professors and 16 students; and School of Obstetrics, 2 professors and 24 students; a total of 30 professors and 252 students.

The National Government will establish an EXPERIMENTAL LABORATORY AND INSTITUTE OF PHYSIOLOGY in the near future with funds provided for the purpose in the current budget.

During 1918 the MILITARY INSTITUTE graduated seven pupils, who immediately entered the army with the corresponding ranks.

The SCHOOL OF RADIO TELEGRAPHY, which is under the same supervision as the military institute, has graduated two classes, the members of which immediately went into the service of the Government, the first seven as employees in Government offices and the latter five to complete their practical training in State offices.

PERU.

In response to the present and future needs of the Navy for technically trained officers in directing the operations of warships, the President issued a decree April 8 creating a NAVAL TRAINING SCHOOL, for the training of officers. The following subjects will form a prominent part of the curriculum: (a) Artillery; (b) torpedoes and mines; (c) electricity; (d) radiotelegraphy; and (e) pilotage, which will be accompanied by training in navigation, signaling, rigging, military and naval regulations, and technical studies in special

branches for different individuals. At present the school will be established in the vicinity of the submarine base.

The official opening of the FINE ARTS ACADEMY was held in its quarters on San Idelfonso Street in Lima on April 15. Classes in drawing and painting, and lectures on aesthetics, the history of art, archaeology and anatomy will be given.

SALVADOR.

At the suggestion of the departmental board and the Commission of Education of Santa Ana, a SCHOOL for rural school teachers was opened in the city on April 6, in which instruction will be given by lectures on methods of carrying out the official program of public instruction.



GENERAL NOTES

ARGENTINA.

Early in April last work was commenced on the CERVANTES THEATER, situated on the corner of Cordoba and Liberty Streets, Buenos Aires. The construction of this theater is due to the initiative of the celebrated Spanish actors, Diaz de Medina and wife, who planned a theater embodying to a remarkable degree a representation of the dramatic and spiritual genius of the Spanish race. The theater is to be used exclusively for Spanish and Spanish-American plays and for the development of the dramatic art of the Spanish-American countries along lines outlined by the artist referred to. The theater will have a capacity for 1,750 persons.

As the result of an expedition to Mount Aconcagua made a short time ago by a number of Buenos Aires explorers, who ascended the mountain to an altitude of 6,850 meters, or 200 meters less than its highest elevation, the ARGENTINE ALPINE CLUB of Buenos Aires was organized on March 7 last. One of the principal objects of the club is to study the Andean Range in detail.

The Executive power has issued a decree granting a concession to the Siemens-Schubert Co. to operate commercially for their exclusive profit for a period of 30 years a powerful WIRELESS TELEGRAPH STATION capable of communicating direct with central Europe. The station will have 400 kilowatts power according to the system of continuous waves, produced by high power, Telefunken machines, of a length of 10,000 or more meters. The tariffs are to be approved

by the President of the Republic, and the tariffs in force between Argentina and Germany shall be two-thirds less than the present cable rates. The concession referred to does not imply a monopoly nor any special privilege whatsoever.

On April 2 last there was held in Buenos Aires an exhibit of plans of the ARGENTINE ROWING CLUB'S building. These plans were examined by a jury appointed by the Central Society of Architects. The first award was made to Ezequiel M. Real de Azúa and Miguel Madero.

BOLIVIA.

A newspaper of La Paz announces that a NEWSPAPER IN AYMARA, the Inca dialect, is soon to appear in that city, directed by Señor Felipe Pizarro, who has for some time been a teacher among native tribes, becoming proficient in their language. He will call the paper "Aru Wiyiri," which, freely translated, means "dedicated to the diffusion of knowledge."

The ministry of public instruction has provided that the DIRECTORS OF LIBRARIES, MUSEUMS, physical and chemical laboratories be required to give satisfactory security, approved by the district curator and the prefect of the department to protect the property in their custody. The security is to consist of a bond of 10,000 or 15,000 bolivianos (boliviano = \$0.4389 U. S. gold) in the case of directors of libraries and museums, according to the value of the institutions in their charge; and of 2,000 bolivianos for professors in charge of laboratories.

On May 18, 1919, the ELECTION OF SENATORS AND DEPUTIES ordered by presidential decree of March 11, of this year, was held.

A short time ago the bones of a MAMMOTH PREHISTORIC ANIMAL were discovered within a few leagues of the city of Oruro, at a depth of approximately 3,900 meters. The bones form a part of the cranium and humerus of an extinct mammal known as the mylodon, belonging to the Edentate group, according to the report of the Mineralogical Museum in the School of Engineers. In 1841 a complete skeleton of the animal, measuring nearly 4 meters in length, was found on the pampas near Buenos Aires and purchased by the Surgeon's Museum of London.

BRAZIL.

In April last Bernardo Vanders van Rensellaer, a New York lawyer, visited Rio de Janeiro for the purpose of establishing a branch LAW OFFICE of the firm of Curtis, Mallet-Prevost & Colt of New York City.

According to data compiled by the municipal bureau of statistics the number of VEHICLES in 1918 in Rio de Janeiro in use for freight

and passenger service was 11,758. There were in the city 2,243 passenger automobiles, 1,284 of which were for hire and 959 belonged to private persons, as compared with 1,342 for hire and 681 belonging to private persons in 1917.

On May 3 last the Brazilian CONGRESS opened its sessions. Dr. Delfim Moran, the Vice President, who has acted as President since the lamented death of Dr. Rodriguez Alves, delivered a message to the congress.

CHILE.

Lieut. Armando Cortínez Mujica, of the Chilean army, made on April 5 last, anniversary of the celebrated battle of Naipo, a FLIGHT OVER THE ANDEAN RANGE, thereby repeating the famous aeronautic feat made by the Chilean lieutenant, Godoy, a few months prior to the date mentioned. A Bristol machine of 100 horsepower was used, and the distance from Santiago, Chile, to Mendoza, Argentina, was covered in an hour and 17 minutes. The maximum altitude reached was 4,000 meters. Lieut. Cortínez, who was born in 1893, entered the Chilean army in 1908, and at the present time is instructor of the first aviation company of the army of Chile.

The Chilean delegation which took part in the third contest of the SOUTH AMERICAN OLYMPIC GAMES, held in Montevideo in April last, won the cup "America." This is the second time that an award of this kind has been made to Chilean athletes.

COLOMBIA.

The general directorate of telegraphs has recently signed a contract for the installation of a TELEPHONE SYSTEM in the department of the Valle del Cauca, by which the city of Cali is to have direct service with Cartago through Palmira, Cerrito, Guacarí, Buga, San Pedro, Bugalagrande, Tuluá, San Vicente, Roldanillo, Córdoba, and Boquerón del Dagua.

By presidential decree of April 5, 1919, section 9 of the NATIONAL POLICE is created, to consist of 70 men detailed to San Andrés and Providencia Islands.

One of the oldest captains on Colombian waters has published a MAP OF THE MAGDALENA RIVER, in which the navigable course of this river and its tributaries are accurately defined and ports, towns, and fuel stations indicated.

With a view to reorganizing the MINTS of Bogotá and Medellín so that they may accept private orders, the National Government has sent Señor Benito Zalamea, president of the board of exchange, to the United States to study the methods and machinery used there in coining.

The Bogotá Improvement Society has recently purchased the house in which Gen. Simon Bolívar lived, known as the Quinta

de Bolívar, with the purpose of restoring it and establishing a MUSEUM, in which it is probable a collection of weapons will be included. As a feature of the project the society has opened a prize contest among Colombian writers for an historical sketch of the house. The contest will close June 30.

The President appointed the following CABINET MINISTERS on March 17: Public works, Dr. Carmelo Arango; treasury, Dr. Esteban Jaramillo; and agriculture and commerce, Dr. Jesús del Corral.

The FIRST NATIONAL JURIDICAL CONGRESS will be held August 7 in Bogotá under the auspices of the Colombian Society of Jurisprudence.

COSTA RICA.

On May 1, 1919, the ordinary sessions of the NATIONAL LEGISLATIVE ASSEMBLY were opened in San José according to the procedure authorized in the fundamental charter of the Republic, the president's message being read by the minister of foreign relations, according to custom. The message contained a summary of the international and internal policies that have been pursued by the administration and outlined concretely the general condition of the country and the steps taken by the administration in the year just ended. The election of the senate officials was held, by which the following were chosen: President, Señor Don José Astua Aguilar; vice-president, Señor Don Clodomiro Figueroa Candanedo; first secretary Señor Don Francisco Segreda; and second secretary, Señor Don Aristides Aguero. The officers of the house of representatives were elected as follows: President, Señor Don Francisco Faerrón; vice president, Señor Don Amancio Sáenz; first secretary, Señor Don Julio Esquivel; and second secretary, Señor Don Leónidas Briceño.

In the presidential message it was stated that the National Government is preparing to undertake an active SANITATION CAMPAIGN throughout the Republic, sparing no pains or expense. The condition of the country during the past year was satisfactory.

Costa Rica has added three dates to her list of NATIONAL HOLIDAYS—July 14, the anniversary of the fall of the bastille in 1789; July 24, the birthday of Simón Bolívar, the liberator, hero of South American independence, and November 11, the date of the signing of the armistice between the allied powers and Germany.

Señor Don José Almarez, the new RESIDENT MINISTER FROM MEXICO before the Costa Rican Government, was received in public audience on April 24 of this year.

The students of the School of Law of San José have commenced the publication of THE JURIDICAL REVIEW, the official organ of the institution. The first number contains several important articles.

CUBA.

A law of May 6 last enlarges the Cuban consular service and provides for new **CONSULATES AND VICE CONSULATES** as follows: General consulates in Stockholm, Copenhagen, Athens, and Kobe; second-class consulates in Amsterdam, Halifax, Milan, Osaka, Nagoya, Detroit, Cincinnati, Cleveland, Norfolk, and Pensacola; and vice consulates in Aguadilla, Palma de Mallorca, and Pascagoula. The same law creates the post of a consul of the second class attached to the general consulate in Barcelona, Spain, and raises to the rank of consulates general of the first class the consulates in Genoa, Yokohama, San José de Costa Rica, Quito, and Asuncion; to consulates of the first class, Belfast, Santa Cruz de Teneriffe, Boston, New Orleans, San Francisco, and San Juan de Puerto Rico; and to consulates of the second class the vice consulates at Geneva, Bordeaux, and Glasgow. The consulate general at Halifax is transferred to Ottawa, capital of Canada.

The same law establishes a **LEGATION** in Portugal in charge of a minister resident and second secretary, closes the general consulate at Lisbon, and establishes a second-class consulate in the Portuguese capital. This law also establishes the post of first secretary in the legations of Brazil and Chile and discontinues the post of secretaries of the second class in said legations, as well as the consulate of the second class at Petrograd. The two legations maintained in Central America are merged into one, in charge of a minister extraordinary and plenipotentiary and a second secretary, the headquarters of the legation to be designated by the president. The vice consulate attached to the legation of Guatemala is made into an independent office, in charge of a vice consul and a chancellor. After this law has been in force one year the president will advise congress which of the nations have not accredited diplomatic representatives to the Republic, so that congress may act as it may deem proper concerning the matter.

On May 2 last the **NEW MINISTER OF PERU**, Dr. Jorge Polar, was officially received by the President of the Republic.

DOMINICAN REPUBLIC.

The **QUARANTINE RULES AND REGULATIONS** published in the Official Gazette of April 19, 1919, quarantine persons afflicted with any of the following diseases: Asiatic cholera, smallpox, yellow fever, typhus, bubonic plague, and leprosy. Vessels proceeding from any foreign port are considered in quarantine until they have been given free pratique.

An association of notaries recently met at La Vega. One of the principal resolutions adopted was a recommendation to submit to

the Government for its consideration a NOTARIES CODE patterned after the notaries code of France.

The bureau of sanitation of the Dominican Government is conducting an active campaign against the MOSQUITO, with the object of reducing to a minimum the danger of fever infection through this agency.

A BRIDGE over the Camu River at La Vega was recently opened to public traffic, thereby placing that progressive city in easy communication, via Sanchez, with the coast.

Luis Fernando Prada has been appointed CONSUL of Colombia in the city of Santo Domingo.

GUATEMALA.

A law of the legislative assembly of March 18, 1919, fixes December 15 of this year for the ELECTION OF DEPUTIES to the legislative assembly of the Republic, which is to open March 1, 1920, at which time the four-year term prescribed by Article 51 of the national constitution will have expired.

Sres. Manuel María Girón, Máximo Soto Hall, Antonio G. Saravia, Salvador Ortega, Celso Escobar, J. Antonio Mandujano, and León de León Flores, representatives, have been elected members of the PERMANENT COMMISSION of the national legislative assembly.

The TEMPLE OF MINERVA in the city of Guatamala has been completely restored after the damages suffered from the earthquake of the past year.

HAITI.

A meeting of the newspaper men of Port au Prince was held a short time ago for the purpose of discussing the foundation of a HAITIAN PRESS ASSOCIATION. A special committee was appointed to draft the constitution of the future organization.

According to the Haitian newspapers the School of Arts and Crafts, which until recently was under control of Maj. Burwell of the military government, is now under the supervision of the department of interior.

HONDURAS.

A law of the national congress of April 4, 1919, sets the last Sunday of the month of October of the present year and two days following for the election of PRESIDENT AND VICE PRESIDENT OF THE REPUBLIC and magistrates of the supreme court of justice for the constitutional period beginning February 1, 1920, and ending January 31, 1924. The same law provides that on the dates mentioned deputies to the national congress shall be elected by the following departments: Choluteca, 2 deputies and 1 alternate; Intibuca, 1 deputy and 1 alternate; Copan, 2; Tegucigalpa, 1 alternate; Santa Barbara, 1 alternate; del Valle, 1; La Paz, 1; and Colon, 1.

On April 10 the regular sessions of the NATIONAL CONGRESS adjourned in accordance with the established constitutional provisions.

Dr. José María Casco has been elected by the national congress as substitute ATTORNEY FOR THE TREASURY DEPARTMENT.

The chamber of commerce of Honduras at the initiative of the municipality of Tegucigalpa is planning for the establishment of an ASYLUM FOR THE POOR in the capital. Already \$5,000 has been subscribed to for the institution.

MEXICO.

Early in May of the present year the national congress was convened in EXTRAORDINARY SESSION for the election of magistrates of the supreme court of justice and the consideration of various bills presented by the executive, such as the bill concerning modifications of articles 52, 97, and 115 of the political constitution; the oil and mineral fuel law; the reestablishment of the law providing for the writ of habeas corpus; the organization of the federal ministries; organization of the tribunals of the common law and of the public ministry of the federal district and territories; the creation and control of the Bank of the Republic; the authorization of the President to purchase the United Railways of the Peninsula; and the organization controlling mineral fuel; the law under article 123 of the political constitution; and authorization to construct railroads which will connect the State of Sonora with that of Lower California, Peto of Yucatan with Bacalar and Santa Cruz in Quintana Roo, and Santa Lucrecia in Vera Cruz with the port of Campeche.

The general directorate of the post office department has issued a NEW POSTAL CODE modifying that of 1886, which is in force, but does not meet present-day requirements. The new code specifies three classes of mail only: First class, sealed correspondence and registered letters; second class, printed matter of all kinds; and third class, parcels. Certain of the postal rates are also modified.

On May 28, 1919, the FOURTH MEXICAN LABORERS' CONGRESS was held in the city of Zacatecas, attended by delegates from all the laborers' organizations in the federal district and the States.

Dr. José M. González has recently published a CHILDREN'S HEALTH GUIDE, the first work of its kind to be published in Mexico.

NICARAGUA.

By decree No. 34 of February 24 last the national congress approved the ACTS OF THE EXECUTIVE POWER in the departments of fomento, public works, justice, public instruction, and charity for the period comprised between January 1 and October 31, 1918.

On February 27 of the present year Deputy Salvador Chamorro and Senator Carlos Bacz were elected, respectively, **FIRST AND SECOND DESIGNATES** to the presidency of the Republic.

According to official reports the necessary steps have been made toward the taking of a **CENSUS** of the Republic in accordance with the recommendations of the Fourth International Pan American Conference and the Second Scientific Pan American Congress.

The Nicaraguan press advises that the Government of Colombia has appointed Dr. Daniel Gutiérrez Navas **MINISTER** plenipotentiary and envoy extraordinary of that country near the Government of Nicaragua.

PANAMA.

The President of the Republic and several members of the board of trade of the national capital selected, in the old city of Panama, during the latter part of April last, the ground on which to erect the new **STRUCTURE FOR THE STORAGE OF EXPLOSIVES**. The building will consist of three parts—namely, one for the storage of dynamite, another for powder, and a third for other munitions.

Señor Belisario Porras, Jr., special agent of Panama in Venezuela, while in Caracas, in the name of the Government and people of the Republic of Panama, and as a token of respect and veneration, placed a **WREATH OF FLOWERS** at the base of the monument in the mausoleum at Caracas in which rest the ashes of the immortal Bolivar.

A recent legislative decree provides for the celebration of the **FIRST CENTENARY** of the independence of Panama from Spain on November 28, 1921. Among the exercises planned is the celebration in the city of Los Santos of the cry of independence raised there on November 13, 1821.

Under a law of January 28 last there has been established in the city of Panama a **GENERAL BUREAU OF POSTS AND TELEGRAPHS** with power to propose, negotiate, and conclude treaties and postal conventions with the postal authorities of foreign countries, said pacts to be subject to the approval of the Executive Power.

PARAGUAY.

In 1918 the **CITY OF ASUNCION** paved 37,213 square meters of streets, at a cost of 1,900,000 pesos paper, and private citizens of the city expended 9,338,342 pesos paper in buildings and improvements.

The **POST AND TELEGRAPH DEPARTMENT** reports 3,506,868 postal packages transmitted during the year 1918, 4,173,768 packages received, 127,892 telegrams sent, and 100,378 telegrams received.

In 1918 there were 269 kilometers of **TELEGRAPH LINES** put into public service, which, together with the 447 kilometers of the previous year, form a total of 716 kilometers for the past two years.

PERU.

The President of the Republic has appointed Gen. Don Juan M. Zuloaga **PRESIDENT OF THE COUNCIL OF MINISTERS** and minister of war and navy, and Deputy Señor Oscar Mavila as minister of administration and government, to take the place of Señor Don Germán Arenas, resigned.

In view of the fact that the study of American history, and especially that related to the history of Peru, requires a scientific classification and cataloguing of the fundamental material, and since it is best to collect historical and notarial documents of the sixteenth, seventeenth, eighteenth, and nineteenth centuries in a central depository, the President on March 17, 1919, approved a law reorganizing and regulating the **NATIONAL ARCHIVE** created by laws of May 15, 1861, and August 20, 1872.

On April 26, 1919, Señor Dr. Antonio Sagarna, the new **ENVOY EXTRAORDINARY AND MINISTER PLENIPOTENTIARY OF THE ARGENTINE REPUBLIC**, was received in public audience in the presidential palace of Lima.

Señor Don Alfonso M. Siller, the new **RESIDENT MINISTER FROM MEXICO** to Peru, was received in a public audience by the President of the Republic April 12.

The President of the Republic has been authorized by the national congress to obtain an accurate inventory of the **HISTORIC AND ARCHAEOLOGICAL MUSEUM** of Dr. José Lucas Caparó Muñiz, with the purpose of purchasing it for the University of Cuzco.

Señor José María Barreto has been appointed **CHARGE D'AFFAIRES OF PERU IN CARACAS**. Señor Barreto has been acting as secretary of the Peruvian Legation in Bolivia.

SALVADOR.

Dr. Pío Romero Bosque, jr., has been appointed **CONSUL OF SALVADOR IN SAN FRANCISCO**, Calif.

The first number of a **NEW WEEKLY PERIODICAL** called "Student Opinion" (*Opinión Estudiantil*) appeared in San Salvador April 6. It is the official organ of the university body.

The minister of administration has prohibited the establishment of **GAMBLING HOUSES** throughout the Republic and fixed the penalties for violation of the law.

According to the report of Dr. Carlos A. Bailey, director and administrator of the hookworm department, a **HOO KWORM CLINIC** was established in the municipal building of the city of Santa Ana on March 24 of this year, which is the first permanent institution to be created in the country to carry out an active campaign for the relief of the disease.

URUGUAY.

Legislation of April 4, 1919, places Señors Oscar B. Hordeñana and Mario Falcao Espaltar in charge of a COMPILATION OF THE TREATIES AND CONVENTIONS signed by the Republic from 1830 to the present date, under the direction of the ministry of foreign relations.

On April 7 the ROSSELL-PEREYRA PARK, given by Señor and Señorita Rossell-Pereyra to the municipality of Montevideo, was taken over by the city. The gift includes a museum containing objects of great artistic and historic value, and it is the purpose of the municipality to convert the property into a zoological garden worthy of the Uruguayan capital.

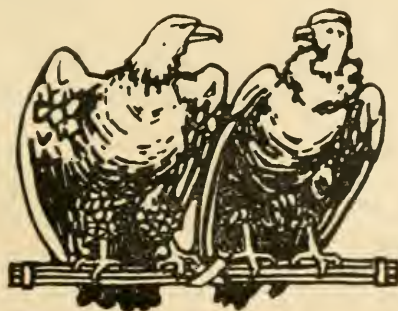
Dr. Don Enrique E. Buero, assistant secretary of state of the department of the treasury, has been appointed to PUBLISH THE LAWS AND DECREES passed in the period between 1915 and 1919, with the corresponding amendments and by-laws.

The PRESIDENTIAL SALARY for the term 1919-1923 has been fixed at 24,000 pesos yearly.

VENEZUELA.

On April 19 last the federal CONGRESS assembled in Caracas in regular session. The following officers were elected: Senate—President, Dr. Pedro M. Arcaya; first vice president, Dr. Santiago Rodríguez R.; second vice president, Dr. Diego Matute. House of deputies—President, Dr. Adolfo Bueno; first vice president, Dr. J. A. Azuaje; and second vice president, Señor. Tomás Sarmiento.

The Governor of the State of Aragua, under a decree of April 19 last, provides for the construction of a CHARITY HOSPITAL in the city of Maracay, in accordance with the plans approved by the board of public health.



SUBJECT MATTER OF CONSULAR REPORTS

REPORTS RECEIVED TO MAY 15, 1919.

Title.	Date.	Author.
- ARGENTINA.		
Cooperative movement in Argentina.....	1919. Jan. 25	W. Henry Robertson, consul general at Buenos Aires.
Portland cement industry in Argentina.....	Jan. 27	Do.
Relative to the market for farm tractors and trucks.....	do.	Wilbert L. Bonney, consul at Rosario.
Market for belting.....	do.	Do.
The market for slack-barrel cooperage material.....	do.	Do.
Market for cream separators.....	Feb. 6	W. Henry Robertson.
Probable market for American coal.....	Feb. 7	Do.
Coal prices, unloading charges, etc.....	Feb. 12	Wilbert L. Bonney.
Current prices for rope and cordage.....	Feb. 18	Do.
Photographic folders and mountings.....	Feb. 19	Do.
Imports of nails for the years 1916 and 1917.....	do.	Do.
BRAZIL.		
Brazilian Government aids schools in agricultural colonies.....	Feb. 7	Augustus J. Hasskarl, vice consul at Rio de Janeiro.
Culture of silkworms in Brazil.....	Feb. 10	Do.
Production of wheat in Brazil.....	Feb. 14	Do.
American Banking Corporation opens offices in Rio de Janeiro.....	Feb. 15	Do.
Increased revenues of federal district.....	Feb. 17	Do.
Brazilian company organized to develop leather-paper industry.....	Feb. 21	Do.
National City Bank of New York City to establish new agencies in Brazil.....	do.	Do.
Lloyd Brasileiro Steamship Line to be given autonomous organization.....	do.	Do.
Animal husbandry in Brazil.....	do.	Do.
American chamber of commerce for Brazil.....	Feb. 27	Do.
Brazilian iron (analyses).....	do.	Do.
American firm authorized to operate in Brazil.....	do.	Do.
Brazilian cotton crop—estimated crop by States, and exports of raw cotton for 1917 and 1918.....	Mar. 5	Do.
Horse breeding in Brazil.....	Mar. 7	Do.
Brazilian mandioca, its uses and applications, cultivation, exports, etc.....	Mar. 10	Do.
CHILE.		
Banking in Chile.....	Feb. 5	Thomas W. Voetter, consul at Valparaiso.
The practice of dentistry in Chile.....	Feb. 21	Do.
Condition of market in northern Chile with respect to American goods.....	Mar. 3	Arnold A. McKay, consul at Antofagasta.
Economic situation in northern Chile.....	Mar. 7	Do.
COLOMBIA.		
Opportunity for establishment of hardware business.....	Jan. 17	Claude E. Guyant, consul at Barranquilla.
COSTA RICA.		
Monthly report of commerce and industry (January, 1919).....	Feb. 24	Benjamin F. Chase, consul at San José.
Detailed statistics of imports for 1918.....	Mar. 21	Do.
DOMINICAN REPUBLIC.		
Agricultural College for Santo Domingo.....	Mar. 6	Clement S. Edwards, consul at Santo Domingo.
Declared exports from Santo Domingo to the United States, year ended Dec. 31, 1918.....	Apr. 7	Do.
ECUADOR.		
Census and statistical office for Guayaquil.....	Jan. 31	Frederic W. Goding, consul general at Guayaquil.
Commerce and industries for month of January, 1919.....	Feb. 10	Do.
Report on yellow fever at Guayaquil.....	Feb. 21	Do.
Market for matches in Ecuador.....	Mar. 11	Do.
GUATEMALA.		
Marketing butter and cheese in district.....	Mar. 3	E. M. Lawton, consul at Guatemala City.
Bank exchange rates.....	Mar. 11	Do.
Lumber imports.....	Mar. 12	Do.
Market for laundry soap.....	Mar. 21	Do.

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MEXICO.		
Print paper mill for Hermosillo.....	1919. Feb. 21	Bartley F. Yost, consul at Guaymas.
Replacing water mains and pumping engines at Guaymas.....	do.....	Do.
Counterfeit American gold coins in Mexico.....	do.....	Do.
Nogales Chamber of Commerce visits west coast.....	Feb. 23	Do.
Result of American trade efforts in Mexico.....	Mar. 1	Edward A. Dow, consul at Ciudad Juarez.
Mines in Northern Chihuahua.....	do.....	Do.
Decree modifying paragraph 140 of export duties of Mexico.....	Mar. 10	Joseph W. Rowe, vice consul at Mexico City (in charge).
Oil in the west of Mexico.....	Mar. 12	Do.
Garbanzo industry and machinery employed.....	Mar. 15	Bartley F. Yost.
Payment of customs duty in Ciudad Juarez.....	Mar. 26	Edward A. Dow.
Market for well-boring outfits in northern Chihuahua.....	do.....	Do.
Paving in Ciudad Juarez.....	Mar. 27	Do.
Street traffic regulations.....	do.....	Do.
Tobacco imports.....	do.....	Thomas D. Bowman, consul at Frontera.
Mining laws (version of El Universal).....	do.....	Joseph W. Rowe.
Report on candelilla wax.....	Mar. 30	Edward A. Dow.
Railroad development in Mexico.....	Mar. 31	Joseph W. Rowe.
Textile factory to reopen in Oaxaca.....	Apr. 1	Do.
Export duties on metals and minerals for April.....	do.....	Do.
New highway.....	Apr. 2	Do.
Mining of zinc and lead at Villa Ahuamada.....	do.....	Edward A. Dow.
Bringing the Mexican buyer to the market.....	Apr. 9	Thomas D. Bowman.
PANAMA.		
Panamanian legislation—Laws of 1919.....	Mar. 8	Alban G. Snyder, consul general at Panama.
Monthly report on commerce and industries for February, 1919..	Mar. 15	Do.
Copy of the patent and trade-mark laws of Panama.....	Mar. 24	Do.
Market for baking powder.....	Mar. 25	Do.
Market for laundry soap and the imports for 1917.....	do.....	Do.
PARAGUAY.		
Imports of paints and varnishes.....	Feb. 13	Henry H. Balch, consul at Asuncion.
Market for coal in Paraguay.....	Feb. 14	Do.
The establishment of temperance zones in Paraguay.....	do.....	Do.
PERU.		
Shipping at Callao.....	Feb. 27	William W. Handley, consul general at Lima.
Coal imports into Callao.....	Mar. 11	Do.
Copy of the report on the new water supply for Lima.....	Apr. 24	Do.
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Official holidays in Uruguay.....	Jan. 9	William Dawson, consul at Montevideo.
Additional port charges for lumber.....	Jan. 10	Do.
Declared exports from Montevideo to the United States, 1914-1918	Jan. 15	Do.
Encouragement of new industries.....	Jan. 16	Do.
Congress of labor inspectors in Uruguay.....	Jan. 18	Do.
Commerce and industries for month of December, 1918.....	Jan. 24	Do.
Insurance of Government property in Uruguay.....	Jan. 27	Do.
Market for sewer pipes.....	Jan. 29	Do.
Uruguayan products in European markets.....	Feb. 6	Do.
The market for American coal.....	Feb. 12	Do.
Dairy industry is little developed in Uruguay.....	do.....	Do.
Laws governing foreign insurance companies (law of Dec. 27, 1911, creating the State Insurance Bank).....	Feb. 13	Do.
Market for men's shirts.....	Feb. 19	Do.
Exports of tallow for the past five years.....	Feb. 21	Do.
No market for foreign matches.....	Feb. 24	Do.
Imports of pig iron.....	Mar. 1	Do.
Marks for live stock in Uruguay.....	do.....	Do.
South American agricultural and industrial exhibition in Montevideo.....	Mar. 6	Do.
VENEZUELA.		
Supply of cattle hair.....	Feb. 27	Homer Brett, consul at La Guaira.
Business conditions in Puerto Cabello.....	do.....	Frank Anderson Henry, consul at Puerto Cabello.
Report on chemicals and drugs, imports for the years 1916 and 1917	do.....	Do.

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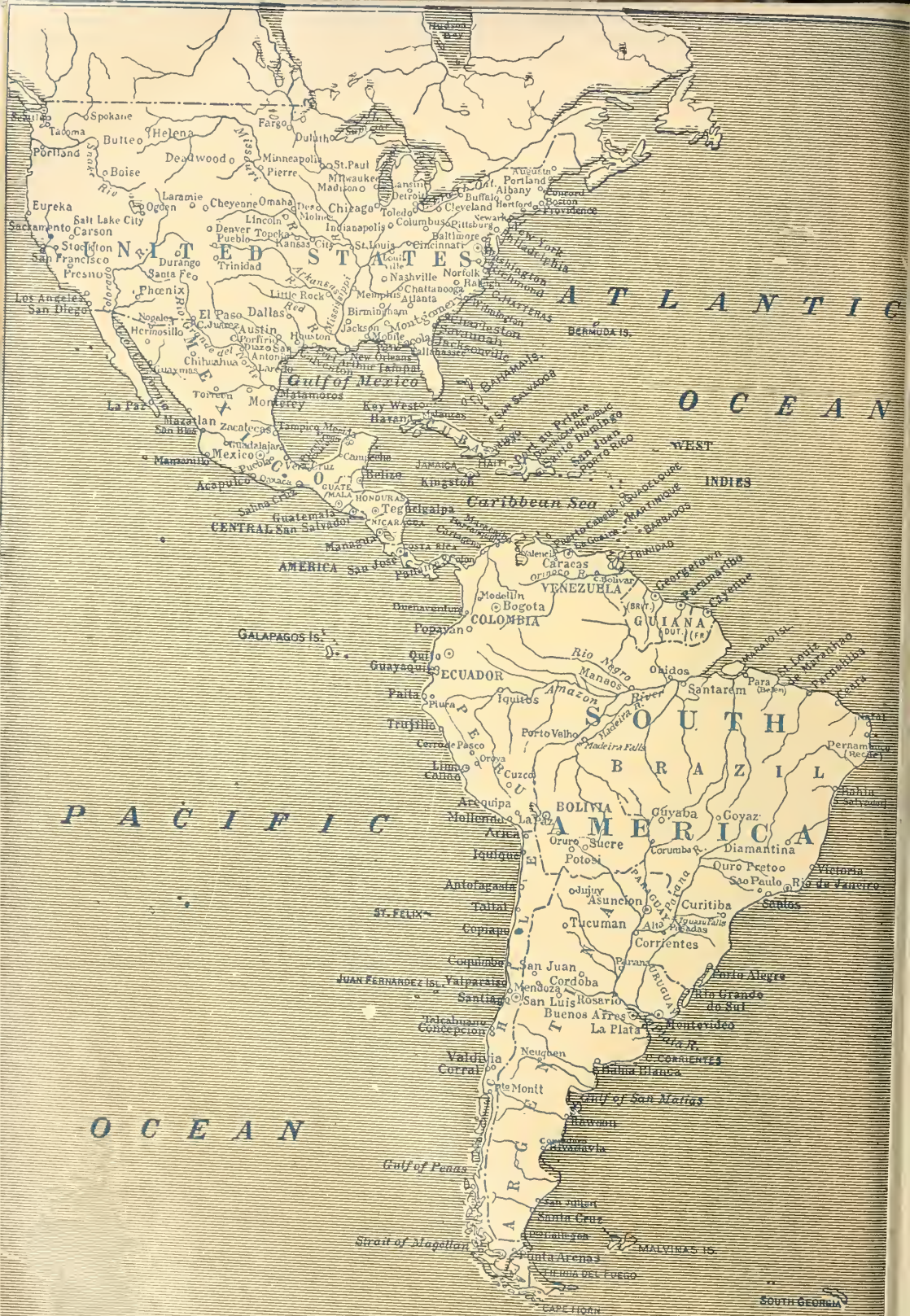
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